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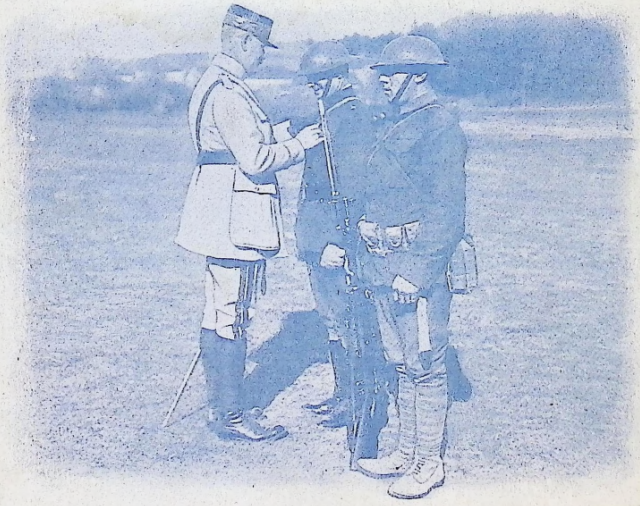

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Vol. XV December, 1918 No. 6

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CONTENTS

MINUTIAE OF CLOSE ORDER DRILL.....Lieutenant Colonel Lentz, General Staff. 451
TARGET DESIGNATION.....Lieut. Col. W. A. McDaniel, Infantry... 470
PSYCHOLOGY OF SOCIAL RECONSTRUCTION Prof. G. T. W. Patrick, State Univ., Iowa. 477
THE TRAINING OF THE A. E. F..... 487
COOKS AND COOKING.....Murl H. DeFoe, U. S. Food Admin..... 494
MODEL MENU..... 499
THE GERMAN MACHINE GUNS..... 506
PREVISION FOR THE POST-BELLUM ARMY...Lieut. Col. J. D. Reardan, Air Service... 508
CAMOUFLAGE..... 513
GERMAN RETREAT FROM THE MARNE..... 515
GERMAN MACHINE-GUN REGULATIONS..... 518

VARIED GROUND:

Notes for Young Staff Officers..... 520
Anglo-American Comrades..... 521
Our Returning Talkers..... 521
Conduct of the Infantry Attack..... 522
German Automatic Rifle..... 523
Demobilization..... 523
German Ruses and Traps during Their Withdrawal to the Vesle, 1918..... 525

EDITORIAL:

Personnel..... 526
The Minutiae of Close Order Drill..... 526
Morale..... 527
The Psychology of Social Reconstruction..... 527
Overseas Service..... 528
The INFANTRY JOURNAL..... 529

BOOK REVIEWS..... 531
The American Rifle—The Doctor's Part—A General's Letters to His Son on Minor Tactics.

THE UNITED STATES INFANTRY ASSOCIATION..... 534
Annual Meeting—News and Gossip.

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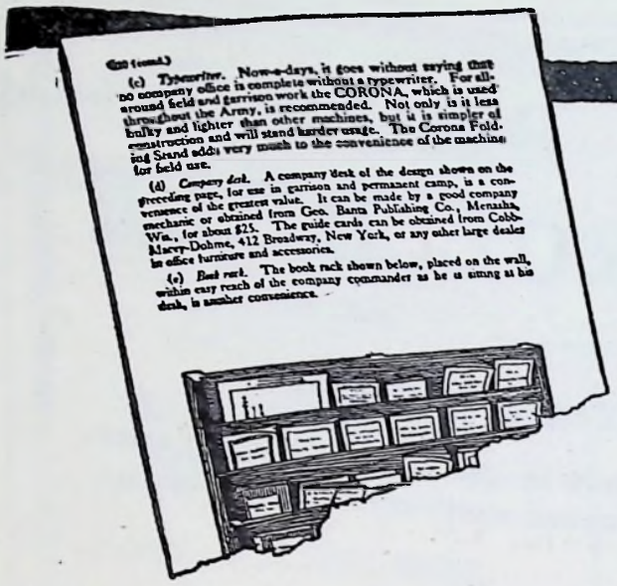

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The Minutiae of Close Order Drill[1]

By Lieutenant Colonel Lentz, General Staff

FOREWORD

SOME infantry companies can be thoroughly trained in close order and extended order drill in three or four months, others are still untrained at the end of from nine to twelve months, and still others never become thoroughly trained. The responsibility for the delayed or unsatisfactory training of infantry recruits rests upon the officers immediately in charge. Poorly executed commands in close order drill almost invariably imply poorly given commands. Unless the officers understand the theory and practice of cadence or rhythm and can transmit this knowledge, both theoretically and practically, to their noncommissioned officers and enlisted men, the organizations undergoing training will never reach that degree of perfection which the Training Committee and the Inspector General's Office have a right to expect.

The subjoined observations have to deal with no radical or unprecedented changes in the Infantry Drill Regulations. These rules herein announced constitute, in fact, no change at all in the Infantry Drill Regulations, but comprise merely a system of interpretations. These rules constitute in no sense a rival system of infantry drill training. They comprise a simple, direct, and elementary method of bringing about a complete and unanimous observance of the spirit as well as the letter of the Infantry Drill Regulations. The average man who dances well dances in cadence or rhythm. It is rarely that a man cannot be taught to dance rhythmically or in cadence. Cadence is no more essential to correct and enjoyable dancing than it is to correct and exact close order drill.

On numerous occasions, General Pershing, in his periodical recommendations to the War Department, has adverted to the necessity for thorough ground work in close order drill, for the reason that it provides the best known method of thoroughly disciplining raw recruits. Disciplinary exercises are valueless unless they are exactly, literally and precisely carried out. It cannot be said that a close order drill has been exactly and precisely carried out if the men get away from the control of the instructor or officer; still less, if the officers do not understand and exemplify cadence.

The system of training herein enlarged upon its intentionally set forth in such detail that any officer or noncom-

[1] This circular, approved and distributed by the War Department, is based on an article by Lieut. Col. Bernard Lentz, entitled "Helpful Hints in Close Order Drill," published in the April, 1918, number of the INFANTRY JOURNAL.

missioned officer can readily grasp it and turn it to account. The system does no more, in a word, than assign counts and numbers to the foot movements and movements in the manual of arms which are already done largely without counting. Instructors have long resorted to the system of counting to preserve the step (such as counting 1, 2, 3, 4, in marching); and to bring about uniformity in the manual of arms, when bringing the command from the "Right Shouder Arms" to "Order Arms," in halting (when the recruit is taught to count 1, 2, 3). This system simply expands the counting to every movement in the School of the Soldier and the School of the Squad, so that every movement is counted and nothing is left to guesswork. Under these rules, the men discipline themselves, for they are called upon to count aloud. Each private becomes his own drillmaster and disciplinarian. He develops that foundation of assurance, "pep," and self-confidence which must, of necessity, underlie true eligibility for the noncommissioned grades. The instructor's knowledge of the subject of close order drill is shared, in a wholesale and comprehensive way, with the men in ranks. The instructor has the satisfaction, moreover, of knowing that they have actually shared this knowledge with him, not by reason of their assertion that they have understood him, but by reason of their having actually sounded off the commands in his hearing and presence, with the same degree of exactness and precision that he is capable of himself. There can be no better proof that the instructor has "put it across."

Yet the so-called "old system" of counting, when the command is halted, is not superseded. The counts added are *the counts intervening between the preparatory commands and the commands of execution on each movement,* and the men themselves, not content with counting between these commands, are, in fact, called upon to give the preparatory commands and the commands of execution. For example, the preliminary or cautionary command is given, "The company will halt, counting two." The men in ranks actually sound off as follows, so adjusting the commands and counts that they are in cadence: "Company, 1, 2, HALT, 1, 2, 1, 2, 3."

It is exceedingly important, inasmuch as a large majority of the movements are started on the left foot, that the instructor pronounce the word, "COMMAND" as his left foot strikes the ground, and that the enlisted men in the ranks are taught to commence their commands at the moment that their left foot strikes the ground the next time. It is necessary that the instructor or officer, if the company be marching, keep in step with the company himself; also, that he bear in mind that while the preparatory command, "COMMAND," "SQUAD," or "PLATOON" is given as the left foot strikes the ground, it is, in fact, spread over two counts as if the words were pronounced as follows:

Comp- (left foot) -ny (right foot)
Pla- (left foot)-toon (right foot)
Squa- (left foot) -ad (right foot).

In order to insure perfection in the entire command, the instructor, himself carefully selected, should first train the officers; then, under his supervision, the officers should instruct the noncommissioned officers. At this stage, the corps of officers and noncommissioned officers should be competent to transmit

the instruction to the enlisted men. If they are not then found competent, the instruction by the original officer should be continued until all the officers and noncommissioned officers of the particular command can safely be pronounced competent. If, in the early stages, any of the students, whether enlisted men, noncommissioned officers, or officers, experience difficulty in grasping the necessity for giving preparatory and other commands in cadence, it may serve to emphasize the point if the instructor will teach this method as a temporary expedient: Instead of spreading the word "Squad" or "Company" over two counts, pronounce the word quickly as the left foot strikes the ground, and follow this short, pungent command with the count of "2" pronounced as follows—"Squad, 2, 1, 2, HALT, 1, 2, 1, 2, 3," or, "Squad, 2, HALT, 1, 2, 1, 2, 3." This practice is not to be resorted to generally, however, for the average officer or enlisted man, without difficulty, can form the habit of spreading the preparatory command over two counts.

Wherever, in the following rules, the command appears, "The squad will halt without counting," the words "without counting" have reference solely to the counting of the steps between the preparatory command and the command of execution. Illustration: "Squad, HALT, 1, 2, 1, 2, 3," or "Squad, 2, HALT, 1, 2, 1, 2, 3."

The recruit should not be confused by unnecessary counting of the steps (1, 2, 3, 4). His attention should be centered on the special counts required for the particular movement in Infantry Drill Regulation. For example, after the column of squads has moved itself forward from a halt, file closers should not count step, if the men be well disciplined and trained. Whenever necessary to count step, file closers should not repeat it oftener than once. Constant repetition of the counting of the step serves no useful purpose.

In illustrating the cadence system of training troops, it will be found that the man in ranks who makes a mistake becomes instantly aware of it and tends to correct himself. If he sounds off with the wrong number or word, or. having sounded off, does not execute it in the correct manner, his mistake is sure to be conspicuous. It follows that out of sheer fear of being conspicuous he will bring to bear sufficient inhibition and alertness of mind to overcome any natural tendency to sloppiness or nonconformity.

Should the men prove slow in developing this coordination between mind and body so essential to close order drill, it will be desirable in the early stages of the drill to endow each man who makes a mistake, with a chalk mark on his blouse or shirt, on the left breast, which is where a medal of honor or distinguished service cross would be worn. These "reverse English" badges of distinction are much disliked by the men in ranks. The men are reluctant, to a surprising degree, to wear back to the barracks these dubious decorations.

The psychological fact has been abundantly demonstrated that snappy close order drill is contagious. A new popular song does not spread any more rapidly among music lovers, who enjoy and appreciate rhythmic cadenzas, than does good cadenced drill among soldiers, who enjoy and appreciate rhythmic foot movements. The idea has been tried on a sufficient scale already to demonstrate that it will popularize itself and will become infectious from

the very outset. It will gather momentum as it spreads from unit to unit within the division, and from camp to camp, and if intelligently taught and thoroughly understood will quickly become part and parcel of the training of the entire army.

It is to be noted that the system described herein is explained for the left foot only. After it has been worked out for the left foot, it may, in keeping with the drill regulations, be worked out for the right foot; but in this case care must be exercised that all commands are given as the right foot strikes the ground, or the commands will be out of cadence.

In reading the following general rules, it should be borne in mind that the parenthesized numbers at the left of the column indicate groups or pairs of cadenced numbers, and that the numbers as pronounced by the instructor and by the enlisted men in ranks are indicated by numbers not in parenthesis, arranged on the right hand side of the column.

GENERAL RULES

The following general rules govern close order drill under this system:

Commands.—All commands are given as the left foot strikes the ground, unless particular exception to the contrary is made. When the men give the commands, the instructor, after cautioning them as to what is desired, will take particular care to see that his command, "COMMAND," is given as the left foot strikes the ground. In every instance when his command is given on the left foot, the men will not give their commands until their left feet hit the ground again.

The commands must be spirited and given with a force that actually lifts the men into the movement ordered.

The men must be taught to breathe deeply and fill their lungs before giving any command. The air in the lungs should be expelled by a sudden and forcible contraction of the diaphragm with every command uttered. Commands of execution, given with the rising inflection of voice, must not be pitched high, and the tones must not be choked in the throat.

Positions of the Piece.—Great care must be exercised by commanders to see that all provisions of the Infantry Drill Regulations are adhered to in regard to the positions of the piece.

In coming to the right shoulder at the count of "1," after the command, "Forward, MARCH," has been given, as well as any other command that sets the squad in action, the piece is thrown diagonally across the body and grasped at the balance by the left hand, thumb and fingers around the piece, the piece crossing the body at the juncture of the neck and shoulder. The right hand is at the butt. The heel of the butt is between the first and second finger. The thumb is kept close to the side. At the count of "2," by a quick, upward thrust of the left hand, and by turning the butt of the piece to the front, the piece is placed on the right shoulder, without ducking or moving the head, with the trigger guard in the hollow of the shoulder. The left hand, thumb and fingers extended and joined, forearm and wrist straight, slips to the small of the stock, the tip of the forefinger resting against the cocking piece and steadying the piece. The right forearm is horizontal; both elbows are close to the sides. At the count of "3" the left hand is cut smartly to the side.

After the halt, in coming to the order, at the count of "1," the piece is

thrown diagonally across the body by pressing the right hand sharply down, and when the piece is clear of the headpiece, by turning the heel of the piece to the right. The piece then falls of its own weight into the left hand, raised quickly to receive it, and is grasped smartly at the balance. The right hand remains at the butt. The piece is held firmly in this position, which is the same as that assumed on the count of "1" in coming to the right shoulder. At the count of "2" the piece is released by the right hand, which slides along the barrel, and carried quickly to the right side by the left hand, and lowered until the butt is within 3 inches of the ground. The piece is then re-grasped by the right hand, fingers and thumb including the piece, and the left hand, thumb and fingers joined, left forearm and wrist straight, steadies the piece, tips of the fingers resting just below the stacking swivel. At the count of "3" the piece is lowered gently to the ground by the right hand, the toe of the butt in line with and against the toe of the right shoe. The left hand is cut smartly away to the side at the count of "3."

Discipline. — Instructors must be vigilant in detecting the slightest infraction of discipline at attention. The men must keep their head and eyes straight to the front; must keep their shoulders square and falling equally, and their chests arched; and must not swing the hands abnormally. In fact, discipline must be ironclad. The instructor must detect and take the soldier to task for every single mistake he makes and require him to execute each movement exactly as prescribed in the Infantry Drill Regulations.

Corrections.—In furtherance of this idea, it has been found that there is only one proper way to give corrections without disturbing the equanimity of the entire command. That way is to pronounce the name of the man to be corrected before any censure is made. For example it should be, "Smith, depress the butt of your piece," and obviously not, "Depress the butt of your piece, Smith;" for in this latter case the attention of every man in the company is taken off the drill momentarily, as each one looks to his own piece. In the other way, however, only the man at fault has his attention directed to the error.

In asking questions to bring out the men's knowledge of what they have learned, exactly the reverse is true. If the instructor says, "Smith, what is the position of the soldier?", it is obvious that only Smith will endeavor to solve the problem; but, if the question is first asked, "What is the position of the soldier?", every man will be on the alert, and will think and endeavor to frame a correct answer. Then after a a brief pause, the instructor should designate the man, by name, whose answer he desires.

Personal Cleanliness.—Personal cleanliness must be religiously insisted upon, and the men forced to keep themselves and their clothing and equipment spotless. This can be done by appealing to their pride and by having the instructor set the proper example. It must be remembered that although each man presents a different problem to be solved, and one which must be solved, the squad or company, as a whole, cannot possibly be better than its instructor.

In connection with the use of the charts, the commands to be given by the instructor are on the left and the

commands to be given by the men are shown on the right.

THE SCHOOL OF THE SOLDIER

Facings

56. To the flank: 1. Right (left), 2. FACE.

The instructor cautions: "The squad will command, 'Right, FACE,' and execute it." At his command, "COMMAND," each soldier sounds off, "Right FACE," and counts, "1, 2." At the count of "1" the soldier raises slightly the left heel and right toe; faces to the right, turning on the right heel, assisted by a slight pressure on the ball of the left foot.

At the count of "2" the soldier places the left foot smartly by the side of the right. Left face is executed on the left heel in the corresponding manner.

57. To the rear: 1. About, 2. FACE.

The instructor cautions: "The squad will command, 'About, FACE,' and execute it." At his command, "COMMAND," each soldier sounds off, "About, FACE," and counts, "1, 2." At the count of "1" the toe of the right foot is carried about one-half foot-length to the rear, and slightly to the left of the left heel without changing the position of the left foot.

At the count of "2" each soldier faces to the rear, turning to the right on the left heel and right toe.

Salute with the Hand

58. 1. Hand, 2. SALUTE.

The instructor cautions: "The squad will command, 'Hand, SALUTE,' and execute it." He next commands, "COMMAND." The soldier then sounds off, "Hand, SALUTE." At this command each soldier raises the right hand smartly till the tip of the forefinger touches the lower part of the headdress or forehead above the right eye, thumb and fingers extended and joined, palm to the left, forearm inclined at 45 degrees, hand and wrist straight; at the same time look towards the person saluted. The instructor then cautions: "The company will command, '2,' COMMAND." The soldier then commands "2" and cuts the hand smartly to his side.

Quick Time

62. Being at a halt, to march forward in quick time: 1. Forward, 2. MARCH.

The instructor first cautions: "The company will move forward." He next commands, "COMMAND." The soldier then sounds off, "Forward, MARCH," and counts, "1, 2, 3." At the command, "Forward" the soldier shifts the weight of the body to his right leg, left knee straight. At the command, "MARCH" the soldier lifts the left foot smartly straight forward, 30 inches from the right, sole near the ground, and places it without shock, as he counts "1." At the count of "1" the rifle is thrown diagonally across the body. At the count of "2" the right foot is advanced and planted 30 inches in advance of the left, and the piece is carried to the right shoulder. At the count of "3" the left foot is advanced, and the right hand is cut smartly away to the side.

Fig. I.—Forward March

The squad will move forward.

COMMAND 1. Forward; 2. MARCH.

o L — 1 — Piece thrown across the body.

o R — 2 — Piece on right shoulder.

o L — 3 — Cut left hand smartly away.

To Halt

70. To arrest the march in quick or double time: "1. Squad, 2. HALT."

The instructor cautions: "The company will halt without counting." Then, as the left foot strikes the ground, the instructor will order, "COMMAND." Then, as the left foot strikes the ground again, the soldier will command, "Company," and prolong it until the right foot next strikes the ground. Then, as the left foot is planted again, the soldier will command, "HALT," and count, "1, 2, 1, 2, 3." At the count of "1" the right foot is advanced and planted smartly and surely on the ground. At the count of "2" the left foot is advanced and placed by the side of the right with precision. As the count "1" is enunciated the second time, the piece is thrown diagonally across the body by pressing the right hand sharply down, and when the piece is clear of the headpiece, by turning the heel of the piece to the right. The piece then falls of its own weight into the left hand, poised to receive it, and is grasped smartly at the balance. The right hand remains at the butt. At the count of "2" the piece is released by the right hand and carried quickly to the right side by the left hand, and, sliding through the fingers of the right hand, is lowered until the butt is within 3 inches of the ground. The piece is then re-grasped by the right hand, fingers and thumb including the piece, and the left hand, thumb and fingers extended and joined, left forearm and wrist straight, steadies the piece, the tips of the fingers resting just below the stacking swivel. At the count of "3" the piece is lowered gently to the ground, the toe of the piece on line with the toe of the right shoe, barrel to the rear, and the left hand is cut smartly away to the side.

"1. In place, 2. HALT," is executed exactly as "1. Squad, 2. HALT," except that pieces are not brought to the order, and the soldiers face in the direction in which they were marching.

Fig. II.—To Halt without Counting

The squad will halt without counting.

COMMAND	(1)	o R	o L	
	(2)	o R	o L	Squad
	(3)		o L	HALT
	(4)	o R	o L	1, 2, 1, 2, 3. Complete halt and bring piece to order.

Fig. III.—To Halt, Counting Two

The squad will halt, counting two.

		o R		
COMMAND	(1)		o L	
		o R		
	(2)		o L	Squad
		o R		
	(3)		o L	1
		o R		2
	(4)		o L	HALT
	(5)	o R	o L	1, 2, 1, 2, 3. Complete halt and bring piece to order.

Fig. IV.—To Halt, Counting Four

The squad will halt, counting four.

COMMAND	(1)	o R	o L	
	(2)	o R	o L	Squad
	(3)	o R	o L	1
	(4)	o R	o L	2 3
	(5)	o R	o L	4 HALT
	(6)	o R	o L	1, 2, 1, 2, 3. Complete halt and bring piece to order.

To March by the Flank

71. Being in march: "1. By the right (left) flank, 2. MARCH."

The instructor cautions: "The squad will move, 'By the right flank,'" and gives his command, "COMMAND," as the right foot strikes the ground. As the right foot hits the ground again, each soldier commands, "By the right flank," prolonging it until the left foot is planted. When the right foot strikes the ground again, each soldier commands "MARCH."

The instructor may also caution: "The squad will move, 'By the right flank,' counting two." At his command, "COMMAND," the men sound off, "By the right flank," as the right foot hits the ground, prolonging it until the left foot is planted, and count, "1" to the right foot, "2" to the left foot, and "MARCH" as the right foot hits the ground again.

It must be noted that the command, "By the right flank," and the command of execution, "MARCH," must be given on the right foot; whereas, in a movement to the left flank, the command of preparation is begun as the left foot hits the ground, and the command of execution is given as the left foot hits the ground again.

Fig. V.—The Squad Will Move, "By the Right Flank," Counting Two

The squad will move, "By the right flank," counting two.

	o R		
		o L	
COMMAND	o R		
		o L	
	o R		By the right flank,
		o L	
	o R		1
		o L	2
	o R		MARCH
o R —	2	o L —	1

Fig. VI.—The Squad Will Move, "By the Right Flank," without Counting

The squad will move, "By the right flank," without counting.

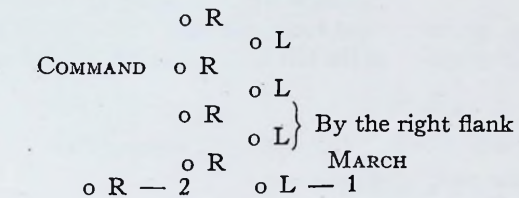


Fig. VII.—The Squad Will Move, "By the Left Flank," Counting Two

The squad will move, "By the left flank," counting two.

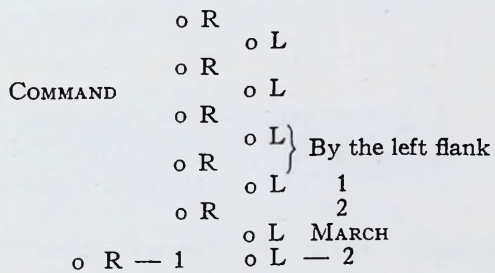
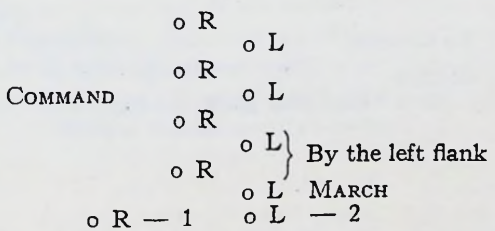


Fig. VIII.—The Squad Will Move, "By the Left Flank," without Counting

The squad will move, "By the left flank," without counting.



To March to the Rear

72. Being in march: "1. To the rear, 2. MARCH."

The instructor cautions, "The squad will move, 'To the rear.'" He gives his command, "COMMAND," as the right foot hits the ground. As the men plant their right feet the next time, each one sounds off, "To the rear," prolonging it until the left foot is planted. "MARCH" is given as the right foot hits the ground the next time. At the command, "MARCH," given as the right foot strikes the ground, each soldier ad-

vances and plants the left foot, turns to the right about on the balls of both feet and immediately steps off with the left foot.

The count of "2, 4, 6" may be included between the command of preparation and the command of execution as described for the movement, "By the right flank, MARCH."

Fig. IX.—The Squad Will March, "To the Rear," Counting Two

The squad will move, "To the rear," counting two.

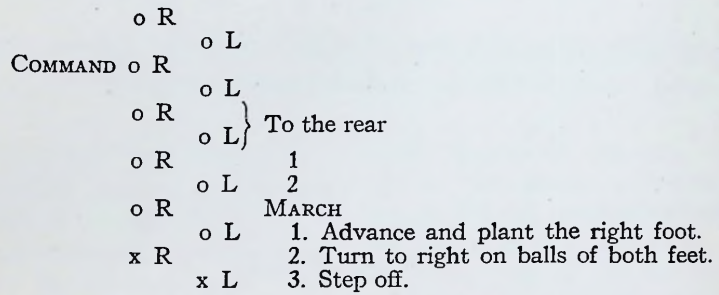
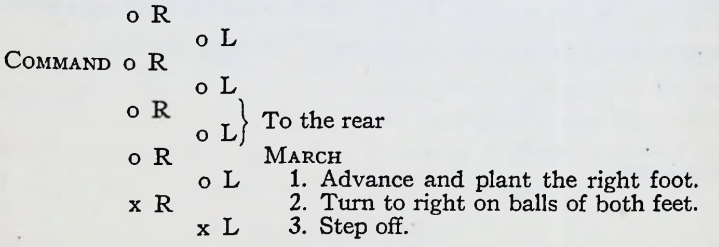


Fig. X.—The Squad Will March, "To the Rear," without Counting

The squad will move, "To the rear," without counting.



Change Step

73. Being in march: "1. Change step, 2. MARCH."

The instructor cautions, "The squad will 'Change step.'" He commands, "COMMAND" as the left foot strikes the ground. When the left foot is planted the next time, each soldier sounds off, "Change step," prolonging it until the right foot is planted. "MARCH" is given as the left foot strikes the ground again, and the men count "1 and 2." At the count of "1" the men advance and plant the right foot; plant the toe of the left foot near the heel of the right and step off with the right foot.

The change on the left foot is similarly executed, the command "MARCH" being given as the right foot strikes the ground.

Fig. XI.—The Squad Will "Change Step," Counting Two

The squad will "Change step," counting two.

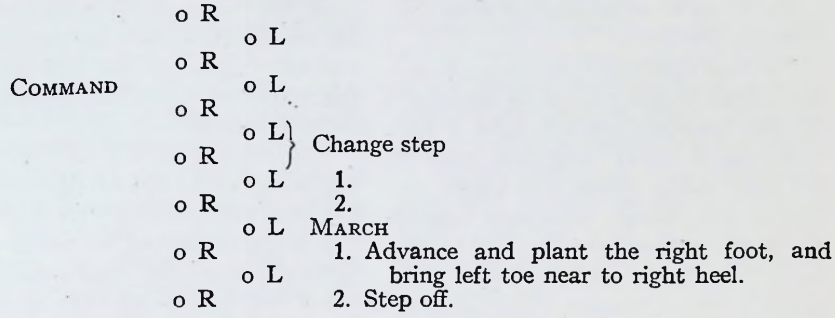
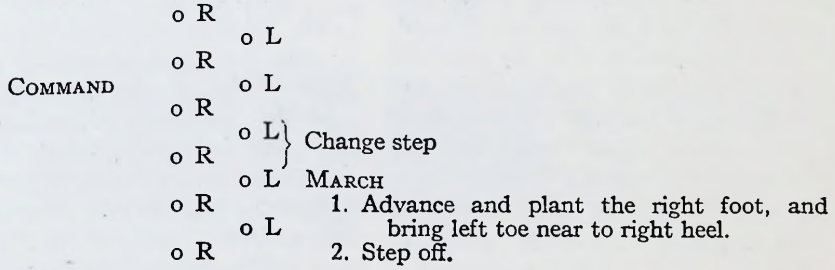


Fig. XII.—The Squad Will "Change Step," without Counting

The squad will "Change step," without counting.



Manual of Arms

74. The manual of arms is executed exactly as prescribed in the Infantry Drill Regulations. To cause any movement to be executed, the instructor, for example, cautions, "The company will command, 'Right shoulder, ARMS,' and execute it." He then commands, "COMMAND." The soldier then sounds off, "Right shoulder, ARMS," and counts, "1, 2, 3," executing the movement as prescribed by the numbers. The count varies, of course, with the number of motions in the movement. If it is desired to execute, "Port, ARMS," the soldier, after giving the command, merely counts "1." If "Present, ARMS" is to be executed, after giving the command, the soldier counts, "1, 2."

Rifle Salute

93. Being at right shoulder arms: "1. Rifle, 2. SALUTE."

The instructor cautions, "The company will command, 'Rifle, SALUTE,' and execute it." At the instructor's command, "COMMAND," the soldier sounds off, "Rifle, SALUTE." At this command the left hand is carried smartly to the small of the stock, forearm horizontal, palm of the hand down, thumb and fingers extended and joined, forefinger touching the end of the cocking piece. The soldier looks towards the person saluted. The instructor then cautions, "The company will command '2,' COMMAND." The soldier then commands, "2," and cuts the left hand

smartly away to the side, turning the head and eyes to the front.

94. Being at order or trail arms: "1. Rifle, 2, SALUTE."

The instructor cautions as above, and the soldier sounds off, "Rifle, SALUTE." At this command the left hand is carried smartly to the right side, palm of the hand down, thumb and fingers extended and joined, forefinger against the piece near the muzzle. The soldier looks towards the person saluted. The instructor then cautions, "The company will command '2,' COMMAND." The soldier then commands, "2," and cuts the left hand smartly away to the side, turning the head and eyes to the front.

If it is desired to have the men hold the first position of rifle or hand salute, the instructor cautions, "The company will command, 'Hand (Rifle), SALUTE,' and execute it, and hold it until I command '2.'" The men, upon the instructor's command, "COMMAND," sound off, "Hand, SALUTE." At the instructor's command of "2" the hand is cut smartly away to the side. This method of instruction is valuable in connection with teaching the men to hold their salute until it is returned by the person saluted.

The Inspection

98. Being at order arms: "1. Inspection, 2. ARMS."

At the second command, take the position of port arms (Two). Seize the bolt handle with the thumb and forefinger of the right hand, turn the handle up, draw the bolt back and glance at the chamber. Having found the chamber empty, or having emptied it, raise the head and eyes to the front.

99. Being at inspection arms: "1. Order (Right shoulder, port), 2. ARMS."

At the preparatory command, push the bolt forward, turn the handle down, pull the trigger, resume port arms. At the command, "ARMS," complete the movement ordered.

The instructor must be very exacting in the execution of the inspection. He must see that pieces are firmly held and are not allowed to waver in the men's grasp as they open and close the bolts. All movements must be made in the minimum of time and with maximum precision and in absolute unison.

THE SCHOOL OF THE SQUAD

107. To align the squad, the base file or files having been established: "1. Right (Left), 2. DRESS, 3. FRONT."

At the command, "DRESS," all men place the left hand upon the hip (whether dressing to the right or left); each man, except the base file, executes, "Eyes, RIGHT;" and, taking steps of 2 or 3 inches, places himself so that his right arm rests lightly against the arm of the man on his right, and so that his eyes and shoulders are in line with those of the men on his right; the rear men cover in file.

The instructor verifies the alignment of both ranks from the right flank and orders up or back such men as may be in rear or in advance of the line; only the men designated move.

At the command, "FRONT," given when the ranks are aligned, each man turns his head and eyes to the front and drops his left hand by his side.

In the first drills the basis of the alignment is established on, or parallel to, the front of the squad; afterwards, in oblique directions.

Whenever the position of the base file or files necessitates a considerable

movement by the squad, such movement will be executed by marching to the front or oblique, to the flank or backward, as the case may be, without other command, and at the trail.

Special emphasis must be laid upon quick and accurate dressing, in both ranks and the file closers, by inspectors. The tendency of all men in ranks is to move their eyes about and to commit slight infractions of the paragraph regulating the dressing. The hand must be brought up to the head smartly, and the head turned with precision. At the command, "FRONT," the men should be taught to shoot the left hand down by the side and to turn the head front at the same time with precision. The instructor must be ever on the alert to see that, in dressing, the men take the prescribed short steps, and do not "back and fill" in getting their alignment. The tendency for men to carry their arms to the rear is very marked and always clamors for correction. As the men seem exceedingly loath to get their proper intervals, it must be maintained at all times.

To Stack, and Take Arms

113. Being in line at a halt: "STACK ARMS."

Each even number of the front rank grasps his piece with the left hand at the upper band and, resting it, places the butt between his feet, barrel to the front, muzzle inclined slightly to the front and opposite the center of the interval on his right, the thumb and forefinger of the left hand raising the stacking swivel; each even number of the rear rank throws his piece forward with his right hand, releasing it and grasping it again at the balance with the right hand, barrel of the piece up, passing it to his file leader, who grasps it between the bands with his right hand and allows the butt to fall of its own weight about 2 feet in advance of that of his own piece and opposite the right of the interval, the right hand slipping to the upper band, the thumb and forefinger raising the stacking swivel, which he engages with that of his own piece. Each odd number of the front rank then raises his piece with the right hand, carries it well forward, barrel to the front; the left hand, guiding the stacking swivel, engages the lower hook of the swivel of his own piece with the free hook of that of the piece of the rear rank; he then turns the barrel outward into the angle formed by the other two pieces and lowers the butt to the ground, to the right of and against the toe of his left shoe.

The stacks made, the loose pieces are laid on them by the even numbers of the front rank.

When each man has finished handling pieces, he takes the position of the soldier immediately.

Lines passing through the points of contact of the pieces, constituting the stack, with the ground, form an equilateral triangle. When properly stacked in this manner, the greatest rigidity is attained. This should be illustrated by drawing an equilateral triangle with chalk.

The Oblique March

116. For the instruction of recruits, the squad being in column or correctly aligned, the instructor causes the squad to face half right or half left, points out to the men their relative positions, and explains that these are to be maintained in the oblique march.

117. "1. Right (Left) oblique, 2. MARCH."

The instructor cautions, "The squad will move to the 'Right oblique.'" He then commands, "COMMAND" as the right foot hits the ground. When the right foot strikes the ground again, each soldier sounds off, "Right oblique," and when the right foot strikes the ground again, commands "MARCH," and counts, "1, 2." At the count of "1," each soldier advances the left foot and turns on the ball of it. At the count of "2" each soldier steps off with the right foot to the right front, so that the line passing through the shoulders forms an angle of 45 degrees with his original front.

When marching to the oblique, and "HALT" is given, the men halt faced to the front.

In moving to the left oblique, commands of preparation and execution are given on the left foot in a corresponding manner to that prescribed above.

To incline to the left oblique, the instructor cautions his command, "COMMAND," as the right foot strikes the ground, and the soldier turns on the ball of his right foot and steps off with the left foot to the left front, so that the line passing through his shoulders forms an angle of 45 degrees with his original position.

Fig. XIII.—To March to the "Right Oblique," Counting Two

The squad will move to the "right oblique," counting two.

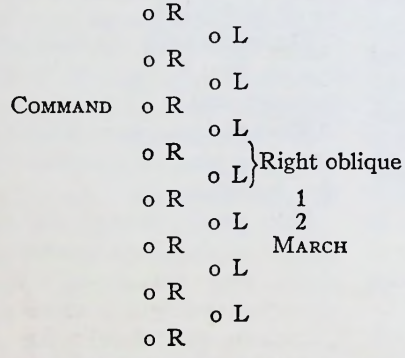


Fig. XIV.—To March to the "Right Oblique," without Counting

The squad will move to the "right oblique," without counting.

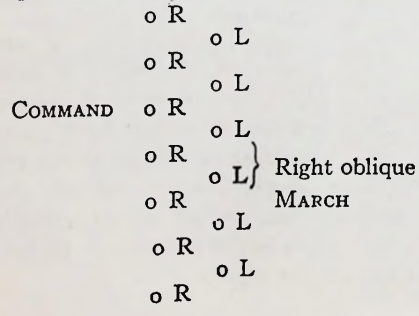


Fig. XV.—To March to the "Left Oblique," Counting Two

The squad will move to the "left oblique," counting two.

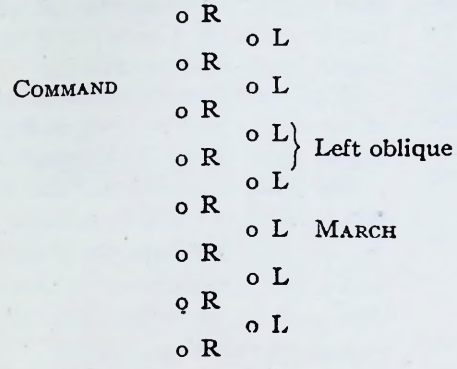
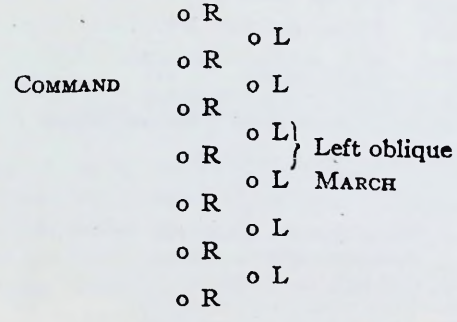


Fig. XVI.—To March to the "Left Oblique," without Counting



To Turn on Moving Pivot

118. Marching in line: "1. Right (left) turn, 2. MARCH."

The instructor cautions, "The squad will move, 'Right turn.'" At his command, "COMMAND," given as the right foot strikes the ground, each soldier, as the right foot strikes the ground again, commands, "Right turn," and adds, "MARCH," as the right foot strikes the ground the next time, and then counts, "1, 2, 3, 4, 5, 6, 7, 8, 9, 10." The movement is executed by each rank successively and on the same ground. At the command, "MARCH," the pivot man of the front rank faces to the right in marching and takes one full step before taking up the half step. The other men of the rank oblique to the right until opposite their places in line, then execute the second right oblique and take the half step on arriving abreast of the pivot man.

At the count of "10" each soldier takes the full step. The count of "1, 2, 3, 4, 5, 6, 7, 8, 9, 10" allows the men in the marching flank just the exact number of steps in which to gain their proper position abreast of the pivot man, and allows the squad to recover its alignment so that all the men step off together.

The commands for left turn are given so that the men sound off on the left foot. The count is the same when more than one squad is being drilled. Column left and column right are executed in the corresponding manner. The commands of preparation and execution for column right must be given as the right foot strikes the ground; whereas those for column left must be given as the left foot strikes the ground.

To Turn on Fixed Pivot

119. Being in line, to turn and march: "1. Squad right (left), 2. MARCH."

The instructor cautions, "The squad will move, 'Squad right' and move off." At his command, "COMMAND," each soldier sounds off, "Squads right, MARCH," and counts, "1, 2, 3." At the second command, the right flank man in the front rank faces to the right in marching and marks time; the other front rank men oblique to the right, place themselves abreast of the pivot, and mark time. In the rear rank, the third man from the right, followed in column by the second and first, moves straight to the front until in rear of his front-rank man, when all face to the right in marching and mark time; the other number of the rear rank moves straight to the front four paces and places himself abreast of the man on his right. Men in the new line step off on the fourth count. It is to be noted that the fourth count is not enunciated.

119½. Being on the march in column of squads, to turn and halt in line: "1. Squad right (left), 2. MARCH."

The instructor cautions, "The squads will move right and halt, counting '2.'" As the left foot hits the ground the instructor commands "COMMAND." The men, as their left foot hits the ground the next time, sound off, "Squad right," and, as their left foot hits the ground again, "MARCH" is added. Then, as the left foot is planted, each soldier sounds off, "Squad," and prolongs it until the right foot is planted, and then counts, "1, 2." As the left foot strikes the ground again, "HALT" is ordered, and the men count, "1, 2, 3, 1, 2, 3." At the count of "1, 2," the halt is completed, and at the count of "1, 2, 3," the pieces are brought to the order.

Squads right (left) about is executed in a corresponding manner, except that six is counted before the halt is given, instead of two, in bringing the squad to the halt.

Fig. XVII.—From a Halt, to Turn on Fixed Pivot and March

The squad will move "Squad right (left)," and move off.

COMMAND "Squad Right, MARCH."

(1)	o L	1. Piece thrown diagonally across body.
o R		2. Piece on right shoulder.
(2)	o L	3. Cut left hand away.
o R		(4) Men count to themselves.
(3)	o L	(5) Men count to themselves.
o R		(6) Men count to themselves.
(4)	o L	(7) Step off in new direction.

Fig. XVIII.—To Turn to the Rear on Fixed Pivot While Marching and Halt

The squad will move "Squad right about" and halt, counting six.

	o R		
		o L	
	o R		
		o L	
	o R		
COMMAND (1)		o L	
	o R		
(2)		o L	Squad right about.
	o R		
(3)		o L	MARCH
	o R		
(4)		o L	Squad
	o R		
(5)		o L	1
	o R		2
(6)		o L	3
	o R		4
(7)		o L	5
	o R		6
(8)		o L	HALT
(9)	o R	o L	1, 2, 1, 2, 3. Complete halt and bring piece to order.

120. Being in line, to turn and halt: "1. Squad right (left), 2. MARCH, 3. Squad, 4. HALT."

The instructor cautions: "The squad will move 'Squad right' and halt, counting '2.'" At his command, "COMMAND," each soldier sounds off, "Squad right, MARCH; Squad, 1, 2, HALT," and counts, "1, 2, 1, 2, 3." The second command, "Squad," is given on the initial step of the left foot and prolonged until the right foot is planted, and the halt is given as the left foot strikes the ground the third time. At the count of "1, 2" the men complete the halt, and at the count of "1, 2, 3" the pieces are brought to the order. The return is executed as prescribed in the preceding paragraph. When executed in this manner, the command, "HALT" is given just as the last man arrives on the line, and the halt is made in the minimum of time with a maximum precision.

Fig. XIX.—From a Halt, to Turn on Fixed Pivot and Halt

The squad will move "Squad right," and halt, counting two.

COMMAND "Squad right, MARCH."

(1)		o L	Squad {Piece across body.
	o R		{Piece on right shoulder.
(2)		o L	1. Cut left hand away.
	o R		2.
(3)		o L	HALT
(4)	o R	o L	1, 2, 1, 2, 3. Complete halt and bring piece to order.

121. Being in line, to turn about and march: "1. Squad right (left) about, 2. MARCH."

The instructor cautions, "The squad will move, 'Squad right about' and move off." At his command, "COMMAND," the men sound off, "Squads right about, MARCH," and count, "1, 2, 3." At the second command, the front rank twice executes "Squads right," initiating the second "Squads right" when the man on the marching flank has arrived abreast of the rank. In the rear rank, the third man from the right, followed by the second and first in column, moves straight to the front until on the men on their right when the second change of direction has been completed and mark time.

122. Being in line, to turn about and halt: "1. Squad right (left) about, 2. MARCH, 3. Squad, 4. HALT."

The instructor cautions, "The squad will move 'Squad right about, and halt, counting six." At his command, "COMMAND," each soldier sounds off "Squad right about, MARCH, squad 1, 2, 3, 4, 5, 6, HALT," and counts, "1, 2, 1, 2, 3." The second command of squads is given on the initial step of the left foot and is prolonged until the right foot is planted, and the count of "1" is taken up as the left foot hits the ground again.

Fig. XX.—From a Halt, to Turn to the Rear on Fixed Pivot and March

COMMAND "Squad right about, MARCH."

(1)		o L	1. Piece thrown across body.
	o R		2. Piece on right shoulder.
(2)		o L	3. Cut left hand away.
	o R		(4) Men count to themselves.
(3)		o L	(5) Men count to themselves.
	o R		(6) Men count to themselves.
(4)		o L	(7) Men count to themselves.
	o R		(8) Men count to themselves.
(5)		o L	(9) Men count to themselves.
	o R		(10) Men count to themselves.
(6)		o L	(11) Men count to themselves. All step off.

the prolongation of the line to be occupied by the rear rank; changes direction to the right; moves in the new direction until in rear of his front-rank man, when he faces to the right in marching and steps off on the ninth count. The fourth, fifth, sixth, seventh, eighth, and ninth counts are not enunciated, but the men keep the cadence by counting to themselves. The fourth man in the rear rank marches on the left of the third to his new position. The front rank men keep abreast of

The command "HALT" is given as the left foot strikes the ground for the fifth time. At the count of "1, 2" the halt is completed. At the count of "1, 2, 3" the pieces are brought to the order. The turn is executed as prescribed in the preceding paragraph. By using this count, the turn is made in the minimum of time and with maximum precision. The count allows number four, rear rank, to step in his proper place, and execute the halt and no more.

Fig. XXI.—From a Halt, to Turn to the Rear on Fixed Pivot and Halt

The squad will move "Squad right about," and halt, counting six.

COMMAND "Squad right about, MARCH."

(1)	o R	o L	Squad {Piece across body. / Piece on right shoulder.
(2)	o R	o L	1. Cut left hand away.
(3)	o R	o L	2.
(4)	o R	o L	3.
(5)	o R	o L	4.
(6)	o R	o L	5.
	o R	o L	6.
	o R	o L	HALT
(7)	o R	o L	1, 2, 1, 3, 4. Complete halt and bring piece to order.

Fig. XXII.—To Turn on Fixed Pivot While Marching and Halt, Counting Two

The squad will move "Squad right," and halt counting two.

	o R	o L	
	o R	o L	
COMMAND (1)	o R	o L	
(2)	o R	o L	Squad right
(3)	o R	o L	MARCH
(4)	o R	o L	Squad
(5)	o R	o L	1.
(6)	o R	o L	2.
	o R	o L	HALT
(7)	o R	o L	1, 2, 1, 2, 3. Complete halt and bring piece to order.

Target Designation

By Lieutenant Colonel W. A. McDaniel, Infantry

THESE remarks are based upon the use of the U. S. Rifle, Cal. 30, Model 1903, commonly called the New Springfield, although some of the remarks may be applicable to machine guns, automatic rifles, artillery, and some even to rifle grenades, hand grenades and trench mortars.

Although the present system of trench warfare, differing from anything ever before known, has brought prominently into use such weapons as bombs, rifle grenades, trench mortars, gas, liquid fire, etc., the infantryman's main weapon and chief reliance is and must be his rifle and bayonet. He must be able to shoot and hit his target. His practice must be such as to make proper aiming and trigger squeezing a fixed habit, for only when such is the case will he do it properly under stress of battle. The utmost attention must be given to this work by all, especially in rapid-fire training, for it is admitted by the Germans that it was the accurate fifteen rounds per minute rapid fire of the British infantry against their massed attacks that saved the British Expeditionary Force from annihilation in the early battles of the war. The German officers expected to lose their first line in the assault, and possibly the second line, but would overwhelm the defenders by weight of numbers when they paused to refill their magazines, but were astounded at the marvelous rapidity, accuracy and lack of perceptible pause for reloading displayed by the British Tommy.

General Morrison in his recent training circular says, under the heading "Bullet and Bayonet," that not only should position and aiming drill be given for from fifteen minutes to half an hour a day before target practice, but it must be resumed after the target practice is completed. He also says that, as soon as men are far enough advanced, there should be not less than 15 shots each, fired per week in gallery practice. In his book on infantry training he says that bayonet fencing must be kept up throughout the year.

A recent British Army memorandum says:

It is the spirit of the bayonet that takes a position and the bullet that holds it. The bullet shatters the counter-attack and kills outside bayonet distance. And finally the bullet is the paramount executioner for offense and defense.

Paragraph one, I. D. R., says that "Success in battle is the ultimate object of all military training." Paragraph 400 says:

In a decisive battle success depends upon gaining and maintaining fire superiority: and in order to obtain fire superiority it is necessary to produce a heavy volume of accurate fire. Some of the things that commanders must take into consideration to gain and maintain fire superiority are (1) choice of target, (2) the distribution of fire, (3) the density of firing lines, (4) the determination of range, (5) the time of opening fire, (6) the kind of fire, (7) the volume of fire, (8) the distance between waves, (9) the service of

observation of the enemy and of the effect of fire, and (10) the effect of hostile fire.

The target chosen should be the hostile troops most dangerous to the firers. These will usually be the nearest hostile infantry. When no target is specially dangerous, that one should be chosen which promises the most hits. Care must be taken to distinguish between the enemy's flank and our flank. Such terms as "Enemy's right" or "Right of enemy's line" must be used when referring to his and "Our Right" or "Right of our line," when referring to our forces; these terms must never be confused.

The proper assignment of tasks, fronts, or sectors and the proper target designation depend upon the leader's knowledge of the situation, and this knowledge will depend to a very great extent upon the personal reconnaissance that the leader has made. In order to make a proper personal reconnaissance, the position of the different commanders should be as far forward as possible at the beginning of an action. So placed the commander can best direct the first deployment upon which the future course of the action so largely depends, secure advantages by making prompt decisions in the face of the enemy, save his troops from making detours, handle them in accordance with a definite plan, and preclude arbitrary action on the part of the commander of the leading unit. These things are very important, as troops deployed and under fire cannot change front and thus they suffer greatly when enfiladed. Troops in close order may suffer heavy losses in a short time if subjected to hostile fire. So in both formations troops must be protected by proper reconnaissance and warning.

The post of the unit commander in action must be such as will enable him to observe the progress of events and to communicate his orders. After having announced where he will be during the action he should not quit his post without leaving someone there to direct messengers and others where to find him. Higher commanders, majors and captains must remember that they cannot move everywhere along the line as they do in peace-time maneuvers, and that subordinate commanders must be told what to do and then allowed to do it. You frequently hear the idea expressed that officers who are prone to move about too much in the field maneuvers and men who do not keep under cover will be cured by the first real bullet coming their way in actual warfare. But experience has taught that this is not true. As they act in peace so will they act in war, for habit cannot be changed by one or several hostile bullets. Men must be required in peace maneuvers to keep under cover, and officers required to confine their activities to their proper spheres instead of trying to do the work of their subordinates as well as their own.

The distance to the target must be determined as accurately as possible and the sights set accordingly. Aside from training and morale this is the most important single factor in securing effective fire at the longer ranges. Except in a deliberately prepared position the most accurate and only practicable method of determining the range will generally be to take the average of several estimates. That is why our Small Arms Firing Manual requires that five or six most accurate estimators of each company are especially designated for the duty of range estimators and given special training; and why General Morrison in his "Infan-

try Training" says: "There should be no week in the year in which the company does not have practice in estimating distance. The weather will make but little difference as the men dress suitably for it, and the work to be of value must be done under varying conditions of light." Proficiency in estimating distance is not easily and quickly learned, and the great majority of men, who have had no military training, are totally ignorant of the subject. The School of Arms has learned that, if good marksmen firing at 800 yards with correct sight setting make 100 hits, they will make only 41 hits if they set their sights at 900 yards and fire at the same target. They have also learned that the average error taken from many thousands of estimates is 12½ per cent. This shows the great need of careful training of the command in estimating distance and the advisability of using instruments, ranging volleys, and any other possible means to supplement the estimates by individuals. In using ranging volleys to ascertain the distance, only the good shots should be allowed to fire.

The distribution of fire over the entire target is of special importance, as a section of the target not covered by fire represents a number of the enemy permitted to fire coolly and effectively. An even distribution of fire is obtained by allotting certain definite sectors of the target to each subdivision of the firing line, special attention being paid to the less visible portions of the target, as men left to their own devices will naturally fire at the most conspicuous parts only. Companies, platoons, squads and individuals must shoot where they are told to shoot, whether their parts of the target be poor or good, otherwise all training in teamwork has been time wasted. In this connection it is of the greatest importance that officers give the men sufficient time to locate their target accurately before ordering firing to commence.

The higher unit commanders may be able to include the division of the objective in their initial order. Such will rarely be the case in the battalion. The battalion commander must usually pass through the zone of artillery fire for a mile or more before he can pick out his first firing position and assign objectives. Here is where target designation begins to play a prominent part in distribution of fire. Before taking up instruction in target designation, officers and men should have become thoroughly familiar with military and topographical terms so as to recognize all features of military importance. They should be able to recognize and point out on a landscape target or the actual terrain all such features as crest, military crest, hill, valley, saddle, skyline and different degrees of slopes, and be able to understand the effects of perspective on the appearance of objects and changing aspects of terrain during an advance or other shifting of position. In this connection it should be noted that a target once assigned must be kept under observation when changing position, as the assignment of sectors is usually made from a central point where the commanders of subdivisions are assembled for orders, and, like a landscape sketch, has not the same appearance except from that point. That is why the School of Arms says the sight setting should always be announced before the target is designated. By so doing the men are not

require to take their eyes off the target to set their sights before opening fire.

Proper target designation within the regiment implies an ability on the part of the regimental commander to describe an objective and its subdivisions from the map as well as from the ground, and such training on the part of his subordinates as will insure a correct translation of his map designation into terms of actual terrain. Within the battalion it implies not only an ability on the part of the battalion commander to describe an objective without ambiguity, but also a uniformity of training throughout the battalion which will enable the men of one company to describe intelligently to men of other companies both targets and fronts, in language and by methods with which all are familiar. Within the company it implies an ability on the part of the company commander to describe the objectives for his platoons within the limits assigned to the company, and also to cover with fire the whole of the target of the company during a forward or backward movement of part of the company. The best method to insure proper distribution of fire during a rush of parts of the company is to use the overlapping method, which means that all parts of the enemy line will be assigned to more than one of our rushing units. By this method no portion of the enemy line will ever be left free from our fire. Men in the firing line nearest those rushing ahead are taught to shift the direction of their fire enough to be sure to miss the men ahead, and those rushing are taught to oblique slightly away from the line in rear. In preparing for the rush men should use a system of getting set which allows them to get into a position of hands, feet and rifle without raising their heads or bodies, but by which they can spring upright and running at the command of execution. The English system is described on pages 38 and 39 in Major Conley's book on "Bayonet Fighting" and another system on page 448, INFANTRY JOURNAL for December, 1917. With either system 2½ or 3 minutes should be allowed the men to get set between *Cease firing* and *Rush command*. All should drop at the command *Halt*, whether they are on the line or not.

If the platoon consists of four squads, the right half of the platoon objective should be given to the first and second squads alike, just as the half of the company objective was given to first and second platoons. The left half would be assigned to the third and fourth in the same way. Because of the fact that in each squad there are usually two or three good shots, while the other men of the squad are only fair or even poor shots, each man of the squad should be instructed to distribute his shots over at least as much space in the hostile line as would be occupied by five men instead of firing all his shots at one place, this to insure that some of the enemy in the squad objective are not being neglected.

In action, the target, as a rule, will not be visible to the soldier, and there must be some quick and fairly accurate method of conveying to every man on the firing line its location and extent. The description of targets, in such a manner as to enable the quick understanding of what is intended, can be appreciated only by those who on the firing line have given commands entirely satisfactory and apparently clear and simple to themselves, but in reality so

vague that only a small portion of their company seemed to understand. Officers examining the target with field glasses must remember that, in describing the target to the men, terms must be used which describe it without field glasses.

Even with targets that are so plainly visible that there can be no possibility of doubt as to what target is meant, there must be some uniform unit of measure by which the target may be divided for purposes of distributing fire of our own line, for there are rarely prominent objects on the landscape which will serve as dividing points of the objectives, and sometimes it is even difficult to find one prominent object to use as a reference point. The width of the second joint of the fingers held at arms' length toward the target furnishes an approximate unit of measure with which we are all equipped, but owing to the different width of fingers and length of arms is not very exact. The width of the sight leaf is uniform when held at the same distance from the eye, but the commanders do not always carry rifles or rifle sights. The use of the mil as a unit of width would obtain exactness, but the mil scale is not carried by the soldier, and its use, even if carried by him, would be unsatisfactory because of inconvenience, loss of time and difficulty of preserving it. The objection to the sight leaf as a unit of width by the men is that, when there are no objects on the landscape to answer for tie-in points for successive leaf measurements, they cannot accurately determine where the leaf widths end when moving the rifle and where to begin the next measurements. But this can be largely overcome by careful, painstaking practice, just as the inability to estimate distance can be overcome. In order to overcome the objections to the use of the different width units given, the School of Arms at Fort Sill has adopted a plan to standardize all three. Twenty inches is as far as the mil scale can conveniently be held from the eye when in the prone position. Therefore, if the mil scale is arranged to be held 20 inches from the eye, each inch will represent 50 mils on the scale. A ruler with inches divided into tenths instead of eighths makes a mil scale. A centimeter scale would be properly divided already, but care must be exercised that the radius represented by the string used must be 1,000 times as long as the unit representing the mil on the scale. The eye placed at the comb of the stock of the service rifle, 14 inches in rear of the rear sight, measures the same amount of landscape using the sight leaf as would be measured by 50 mils of the mil scale held 20 inches from the eye. Fourteen inches is found to be the correct distance for the eye to be in rear of the rear sight by multiplying the width of the sight leaf, which is seven-tenths of an inch, by 1,000 and dividing by 50 the number of mils into which the inch is divided. The width of different fingers and thumbs determines the distance they are to be held from the eye, this distance being learned by comparison of their intercepts with the intercepts of the mil scale or sight leaf.

In this connection the usefulness of the mil scale should be remembered in estimating range or width of enemy line. Of course one of these must be known or estimated to obtain the other. For example, you know that a certain chimney is about 45 feet high; by mul-

tiplying 45 feet by 1,000 and dividing by the number of mils shown on the mil scale from the top of the chimney to the bottom, which we will say is 25, we have 1,800 feet which, reduced to shooting language, is 600 yards.

For target designation, when targets are to be fired on that are visible but about which there might be some confusion, an imaginary horizontal clock face system should be used, the center of the face being at the position of the commander of the firing line and the 12 straight to the front. Example, for a target to the right front: "1,000 yards, target at 1.30 o'clock, that troop of cavalry."

When targets are to be fired on that are inconspicuous or invisible a reference point is located by means of the horizontal clock face, and from this reference point as the center of an imaginary vertical clock face the location of the target is given. Example, for a target toward the left front invisible to the firing line but visible when field glasses are used: "Range, 900 yards; reference point water tank at eleven o'clock; target at 3.30 o'clock; two and one-half sights is the right of the enemy's line, one and one-half sights long." The officer having measured the target with his mile scale gives the target designation to the soldier in sights. The reference point may be in rear of the enemy's position or in front of it, but wherever it is it must be conspicuous. There should be no difficulty in confusing the clock faces, as the horizontal is always used in designating the reference point and the vertical in designating the target. However, I see no reason why a circle using degrees with zero at 12 o'clock should not be used for the horizontal circle unless it is thought that the division into degrees is too unfamiliar and because the designation of the reference point would cause the use of the words *right* and *left*. Example: "reference point water tank 30 degrees right." In this connection, before designating the reference point it is well to locate 12 o'clock definitely by means of some prominent landmark when possible.

There is not much additional to be said about moving targets except that against infantry advancing a sight setting 200 yards less than the estimated range should first be used. When the enemy passes through the zone of effective fire, the sight should be lowered 200 yards and the operation repeated until the battle sight zone is reached in which no sight manipulation is required other than throwing down the sight leaf. Against retreating infantry the range should be increased 200 yards when the target appears to have passed beyond the zone of effective fire.

Against cavalry, due to the rapidity of movement, there will not usually be time for sight manipulation. It should be remembered that battle sight can be used effectively at 600 yards or more by aiming at the target at first and lowering the aim below the object as the target comes nearer, until it is held about 2½ feet below at all distances from 400 yards down, or vice versa if the target is receding. In firing at a target moving across the line of fire it is desirable, on account of the confusion caused, to hit the head of the column. It is therefore necessary to hold to the front a distance sufficient to allow for the time of flight and the rate of march. Against infantry it is sufficient to hold against the head of the marching column. In the case of mounted troops

at a trot, hold to the front 1 yard for every 100 yards of range, and at a gallop 2 yards for every 100 yards of range.

Auxiliary aiming points will be used more and more as troops learn that concealment does not mean defilade and that hedges, thickets, and like objects may sometimes be more dangerous than the open, as they furnish targets for both rifle and artillery fire. Range correction and sight setting for fire by means of auxiliary aiming points are best done with some device based on the scale of sight-leaf graduations of the rifle. Par. 247, I. D. R., says: "If the target cannot be seen by the naked eye, platoon leaders select an object in front or behind it and direct a sight setting to hit the target." But it does not tell us how to find the proper sight setting. The School of Arms does. The theory that we must go upon is that, no matter what the auxiliary aiming point is, the bullet must travel the same trajectory to hit the target. This may be shown by aiming a rifle correctly at any object, say at 1,000 yards, then secure it in a vise while so aimed. Then, leaving the rifle clamped in the vise, aim it at an object on the hillside above. You can see that the rear sight will have to be lowered according as the new target is high up on the hill, while to aim at some object below the target you must raise the slide of the rear sight until it is in line with the front sight and the object being aimed at. In the three cases the bullets strike in the same place, although the line of sight is widely different in each case.

If a detached rear-sight leaf is turned upside down and held 22.125 inches from the eye (22 inches, even, is accurate enough), the auxiliary or artificial range to be used may be read directly where it intercepts the aiming point, the true range intercepting the target to be hit. At ordinary ranges care must be taken not to choose an aiming point that will cause a negative sight setting. Skylines are often not available on this account.

The School of Arms has designed a combination mil scale and inverted sight leaf called the "Musketry Rule," which is manufactured and issued by the Ordnance Department. Its length is 4¾ inches and it is held 15 inches from the eye for using both mil scale and the inverted sight. This is much better than the detached rear sight held 22 inches from the eye, as in the prone position it is quite difficult to get it out 22 inches from the eye. And in finding the auxiliary aiming point with the inverted sight leaf it would be necessary to take the same position the men are to fire in, which is habitually the prone position.

Some field glasses have had the range scale as well as the mil scale engraved on the reticule of the glass. When this can be done a more accurate instrument is obtained, as the detached sight leaf and musketry rule are only as accurate as the process of aiming the rifle.

The Training of the A. E. F.

AS THE A. E. F. becomes more and more a vast homogeneous and independent army all Americans feel a growing stake in the system of military training through which our soldiers are passed on their arrival in France. Is this foreign "finishing school" equal to the strain that is being put upon it today by such a mighty and such a ceaseless tide of new arrivals? How is it organized and where is it carried on?

When General Pershing and his staff arrived here in June, 1917, one of the first preoccupations was to make an exhaustive study of the system of training troops and officers by the French and British in France. This system had necessarily grown up piecemeal under the spur of necessity; its schools and centers of instruction were widely scattered. It was greatly to the advantage of the A. E. F. that General Pershing could organize a scheme of training for our units whose point of departure would be firmly fixed in the sum of our allies' experience of three hard years; and that he could deliberately concentrate the major part of our training activities in a single zone of his own choosing. It is interesting to find that the recommendation made at the end of August, 1917, by the then chief of the training section and a committee of the General Staff on the two points of organization and location has been substantially followed. This system is now in active operation. The essential factors to grasp in regard to it are:

1. That it is a unified system capable of expansion from 50,000 men to several millions.

2. That like the French and British systems it trains both troops and instructors for troops.

3. That by a constant infiltration of new knowledge from the specialized few to the mass, it is kept strictly up to date.

The doctrine which controls it and actuates our methods of combat emanates from the General Staff—that is, from the specialists who are in most vital touch with combat at the front and its constantly changing methods. From them it is transmitted directly to a group of higher schools, known as the army schools. These schools have two broad functions: to train instructors for the secondary or corps schools, and to train smaller groups of specialists—as staff officers, line officers, tank officers, camoufleurs, etc. The corps schools in turn—in principle there is one to each army corps; in practice, a considerably smaller number have been found sufficient—give practical training to the commanders of all units (except artillery and aviation which are taught in separate instruction centers) who are sent through in rotation to learn the newest tricks and pass them on to the divisions. In the army schools, besides a large body of officers under instruction, a large number of noncommissioned officers are always qualifying for commissions in certain branches. In both types of schools the American instructors are assisted by French and

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British specialists, who give both advice and actual instruction.

The training of our troops themselves is, however, carried on by their own officers, but according to a program dictated from headquarters, on the rustic drill grounds of the divisional areas which, like the schools, are collected within a convenient radius of G. H. Q. in the so-called zone of the advance, which lies far enough back from the front to be relatively safe from hostile aircraft. The C. in C. is thus able to have all our training under his direct supervision; and the officers in the schools, a large number of them unfamiliar with actual operations, are placed within easy contact and observation of large bodies of troops. The only instruction centers placed farther back in the base areas, or along the line of communication, are, first, the artillery and aviation centers, and second, the base training schools, which prepare non-military specialists like cooks, waggoners, chauffeurs, etc. The latter are situated at the headquarters of the depot divisions, where casual troops are directed on arrival to be trained according to their civilian qualifications, or as replacements for the sick and wounded.

Before our schools in France could come into operation, their instructors had to be trained. Moreover, the training of the Regular Army Divisions—it will be remembered that they were split into three parts and recruited to strength with raw volunteers—and of the National Guard Divisions that were the first to reach France, was naturally a longer and somewhat different process from the training of the National Army Divisions which are now landing in such numbers. The division which took part in the Cantigny battle was the first to arrive in France. The division which helped stop the German advance at Château-Thierry had been here just two months. The divisions arriving today, organized since October, have had approximately ten months' training in the home camps; though in some cases from 20 to 30 per cent of their men, drafted since December or January, have had only four months. These divisions are in theory supposed to need only one month of training in a divisional area and one in a quiet sector of the front before going into real action. Actually the time schedule must vary a little as the quality of the troops, conditions at the front, and other military questions dictate.

Perhaps the easiest way to understand the training system of the A. E. F. is to follow such a division from its debarkation at a base port. On landing, its artillery is detached to proceed as a body to an artillery camp in the base area. I have seen one of these camps—a former French camp which our ally greatly enlarged for our benefit and handed on to us—a city of well-built barracks, some two and one-quarter miles in circumference, situated in a stretch of wild country admirably adapted for its big artillery ranges. It had its own particularly good hospital, its own bakery, and its officers' mess, in which the cooks had luckily held over from the French regime; its German prisoners who supplemented the service troops in the care of the camp; it had also outside the gates a captive balloon

center and a small aviation center for training artillery observers. Here, just before I came, 11,000 men had been in training; this was in February. The camp, its commander said, could take care of 14,000 and no doubt it is now called on to do so. This is one of many large, light artillery training centers; we have, besides, centers for heavy artillery, and an artillery candidates school.

Let us now catch up with our division, whose main body of infantry, signal corps and engineers—shorn, however, of some of its best officers and noncommissioned officers, who are being directly detached to the corps schools—is making a slow progress in heavily laden freight cars toward the zone of the advance. There is not a railway line of France now where one does not see these trains overflowing with American boys, unshaven and weary, dangling their legs in the dust and brushwood, but eagerly scanning the unfamiliar face of the land, on the way to what they naively call "the front." Some of them are considerably disappointed when they find themselves detraining and scattering into billets in country hamlets whose calm is immemorial and whose unpronounceable names are unfamiliar even in France, yet will one day be known in Oklahoma, Texas or New Mexico as the first French home of some famous division.

If I name our southwest it is because the last division I have visited in this big zone, which now bristles with American tents, troops and material—how different from its poverty-stricken aspect in December—hailed from this region. It had the most stirring salute I have seen in our army, and, I believe, the highest record for shooting. In one small village, the headquarters of a regiment, the adjutant conducted us up a very steep hillside to see bayonet drill, and we were not surprised to note a good many Indian types in the ranks. Rough stuff these southwesterners seemed at first, he said, but they soon needed no guardhouse; and he launched into the praise in which all regular army officers now indulge of the wonderful quality of the drafted army.

On the very white roads we met strings of machine gunners, trenches were being outlined in the stubble fields by the pioneer engineers, and from one golden, rolling wheatfield to another flashed the flags of the signal corps. The colonel, who confided his hopes that in another fortnight his men would be smelling real powder, told us that all communication between villages and units was carried on by military liaison methods as strictly as if this were the front.

When a division goes forward from the training area to a quiet sector of the front it is rejoined by its own artillery from the artillery training center, and by its group of officers from the corps school who come back bursting with enthusiasm and eager to impart their practical knowledge of the latest methods of defense and attack. Other officers who have not yet had this advantage are simultaneously detached for another four weeks in the same schools, and when the troops emerge from the trenches, rather weary, with discipline slightly relaxed, it is the latter officers who will be the vitalizing element. Meanwhile, in the trenches, to supplement the newly primed but often inexperienced American officers, there are plenty of sea-

soned French and British officers and soldiers. Our troops have up to now been "amalgamated," as the French put it, for the trench training, first by companies, then as they grow in experience by battalions and regiments, with the troops of our allies. When we have a large number of seasoned troops of our own the system will no doubt change, but at present it is very satisfactory. By the end of the month our men are familiar with the principles of trench warfare.

It must not be supposed that the training of a division ever ends. Even after such an action as the Americans have now seen on the Marne, especially after such an action, it is in need of fresh schooling, fresh discipline and fresh impetus. This will be obtained constantly and unremittingly in our army as it is in all the great armies, preeminently that of the Germans, by the steady passing on of new ideas from the specialized few to the troops. How these ideas are taught in the higher schools will be more fully outlined in a second article. Our General Staff is keenly alive to the necessity of constantly improving our methods of instruction; and if our system works, even approximately, no regular army officer who has gone to seed, no reserve officer unfamiliar with basic military principles, will be able to imperil the lives of his men for long, and no soldier in the ranks will remain ignorant of the practical necessities of his daily job of fighting.

* * * *

It was during a visit to American headquarters last December that I had my first chance to see the army schools —and to realize how broadly the American General Staff was building the foundations of its training system. The fine old French town, about which these schools are grouped, was bitterly cold that day; and very few students had yet assembled. One needed the guidance of an enthusiast, like the head of the training section, to realize that in a few months there would not be a spot in the fields that edged the white road winding back and forth up the long italianate hill, or in the whole wide-spreading countryside, which would not be alive with American officers engaged in the study of a large number of special aspects of the higher military science.

From the terrace of the barracks where the staff college was then located, my distinguished guide pointed out the sites of some thirteen different schools: here machine gunners would soon be firing across a certain very blue reservoir; on that other hill, where an out-of-date fortress loomed, the engineers would have their headquarters; here would be the anti-aircraft school—and so on. We were able to see with our eyes the first small class of the staff college; barely enough typewriters, stoves, tables and chairs, to meet their elementary needs, had been collected; the director lamented that they would have to do their delicate map work in the long dark winter nights by the light of unshaded kerosene. When we drove out to the old fortress where the trench artillery school was supposed to be also in session, we found just two young second lieutenants overwhelmed by the sight of a staff colonel, and, in the long row of casemates beneath the fortress, one trench mortar. The lieutenants displayed it as if it had been a precious museum specimen.

When I went back to X— at the end

of July, seven months after my first visit, I found some three thousand students in the army schools and more thousands of troops training in the area. These schools, as has been explained in an earlier article, are under the direct control of G. H. Q. and have two broad objects. The first is to train instructors for the corps schools, who will thus standardize the training throughout our army. Such instructors are trained in the army signal school with its many different branches, telegraph, telephone, radio, visual methods, carrier pigeons, etc.; in the army infantry specialist's school, with its three branches—automatic weapons, musketry, bayonet and sniping, trench artillery; in the army engineer school. The second object of the army schools is to train special officers who can be more easily and economically taught here in classes drawn from the whole army than if disseminated in smaller classes in the corps schools. Such specialists are trained in the General Staff College; in the army sanitary school where medical tactics—that is, the method of handling field hospitals on the move, etc., as opposed to the technical and administrative side of the medical corps duties—are taught; in the army line school, where the tactics of small units to include the regiment are studied, and which also serves, in the case of students showing special aptitudes, as a feeder for the Army Staff College; in the army engineer school, which includes such advanced special branches as camouflage, mining, heavy bridge building, gas warfare, searchlights (railroad engineers have of course no need for training in France. The so-called pioneer work—wiring and trench digging—is taught with the divisions and road and bridge repairing at the corps schools). Other special schools are the anti-aircraft school; the trench artillery school—trench artillery is, of course, a divisional weapon; anti-aircraft is not: generally speaking, the army schools, as distinguished from the corps schools, teach the non-divisional weapons. The list of schools is always growing. My visit, for instance, fell on the day of the opening of a new one likely to prove very important—the intelligence school. There are, besides, a tank center, where the whole organization of a tank company is trained; and a very large candidates school—the same type exists with each division in the home camps—where after a three-months course noncommissioned officers qualify for commissions in the infantry signal corps and engineers. The course at the General Staff College is also three months long; that of the other schools only a month.

It was of course impossible to see all these schools in action in one summer day, so the commanding general, to whose courtesy I owe much, sent me first to what is the most important school from the point of view of our army, the General Staff College. Its home is a quaint old building, once a convent, I believe, close to the general's headquarters, which are situated, by the way, in a house which some rare architect of the French Renaissance must have greatly enjoyed building. If the officers at the Staff College had any time for archeology they could get their fill at X—, but they are such a fearfully hard-worked and working lot that one doubts their spending many hours even in their own pleasant Gothic Club room on the top floor of the college.

The present class, which bristles with majors, colonels being fairly numerous,

and generals not unknown, is the third of the year and nearly 200 strong. Its staff of instructors includes six American officers, six British, and six French, besides a good many special lecturers from the front or G. H. Q. The great difficulty is of course to find American officers for instructors—our best experts are all needed in our increasing staffs in the field—but it is a difficulty that grows less every day. The class has two problems a week to solve, with lectures and conferences leading up to them—twenty-odd problems during the course, which are supposed to cover every possible phase of staff work; moving divisions, taking over areas, preparing an advance, etc. And these problems can frequently be proved on the terrain—here is the advantage of the concentration of these army schools in one area; staff officers can see many branches of the service functioning under their direct observation.

The same rule applies to other specialists. On the morning of my visit the line school was completely empty; staff and students had gone out to the trench artillery school to see an attack with trench mortars, Stokes mortars and one-pounders demonstrated by a considerable body of troops. I was told that if I should stay until evening I might watch a full-fledged night raid lacking in no particular of shells and gas. At the tank center, to which we next went, the captain in charge dwelt at some length on the problems he was able to work out, just as they are worked out at the front, in cooperation with infantry.

Every specialist at X—, including the commander of the carrier pigeons, who was, I believe, secretary of a famous Pigeon Fanciers' Association in private life, is of course sure that his specialty is going to win the war (if I only had space to describe these three thousand pigeons; the young already installed in their permanent homes, the "mobile pigeon lofts," in which they will journey to the front; the old birds with famous records which their soldiers know by heart). No one more so, however, than the tank captain, who demonstrated with fervor the superior qualities of his little armored pets, which were crawling in and out of shell-holes, crossing trenches, bearing down saplings, turning around on their own axis as neatly as cut-under buggies; and told us how invaluable they had been in the attack on the Marne as a supplementary barrage preceding the infantry, and as demolishers of machine-gun nests. We saw from his vivid description the company of fifteen tanks advancing by platoons of five—the first two abreast, the third following as support. These are the light tanks—our heavy tank center is elsewhere—such as the French use, holding two men, a driver and a gunner, each of whom must be prepared to supplement the other. Consequently all members of the tank company must know not only how to drive the tank and how to shoot the gun; they must also be able to repair the engine and manage the signals.

Tanks are not, of course, divisional weapons; nothing of this sort is to be seen at the corps schools. The purpose of the latter, as before explained, is to give practical training in the latest aspects of warfare to officers and noncommissioned officers from the divisions, who after four weeks return to their units to pass on their information. There are two sets of corps schools—situated, of course, in widely different

parts of the training area—now in full operation; the third will be well started by the time this article is printed. They all have the same program: an infantry specialists school, a signal corps school, an engineer school, a machine-gun school, an aeronautical school for advanced observers' training—the corps artillery school has been temporarily discontinued.

Though the corps schools are far smaller than the army schools—in the second corps school, when I saw it, there were about a thousand officers and noncommissioned officers altogether—the casual visitor cannot hope to see anything like the full program. But the director of the infantry specialist school, a West-Pointer, gave me a very interesting morning out on the hills near a town which was made famous during the first battle of the Marne. Several classes were in keen progress: one throwing dummy grenades; one firing Stokes mortars under the general direction of a captain of the Gordon Highlanders —almost a last survivor of this famous "Suicide Club"; one firing a 37-mm. gun under the direction of a French officer. The Highlander and the West-Pointer gave for my benefit an exhibition of Stokes mortars, which are scarcely more complicated than a piece of gas-pipe, can be picked up as easily as a baby and have yet proved, especially since the German attack of this spring, a most dangerous and powerful weapon. Thirty-five high explosive shells a minute can be fired by a Stokes mortar, and it was largely with a similar German weapon, the *grenadenwerfer,* that the British first lines were completely wiped out in March. Henceforth, said the captain, first lines will be held lightly. . . . The students fired a German mortar after they had demonstrated the other; captured German weapons of all types are studied here so that our troops may be prepared to use them as soon as they fall into their hands in the field.

Very rigid discipline is maintained in the corps schools, and the students are kept busy every second of their study time. That is all the more reason why the environment of their scant leisure hours should be made as agreeable as possible. Life is short these days, said the captain, as he took me over the most delightful officers' club run by the Y. M. C. A. with its garden and tea-tables and long, shady walks running down the river, walks that recall "Flirtation" at West Point, as he said.

Let us not forget—it is a subject of which the American public is only just beginning to realize the importance —that our army in France will achieve success just in proportion as its officers are highly trained. However brave our men, and no men were ever braver, they must not be allowed to risk their lives unnecessarily. They must not only take machine-gun nests, but take them economically; not only endure gas attacks and make them, but do so without excessive losses. Even our endless millions would be washed away like the sands of the sea by enemy fire if our troops were not taught how to meet it with expert method. That is why our General Staff has created the army and the corps schools.

Cooks and Cooking[1]

By Murl H. DeFoe, Publicity Director, United States Food Administration, Michigan Division

CAMP Custer, Battle Creek, June 25.—One of the most popular and consequently successful pieces of German propaganda scattered broadcast in this country was the story that the food saved through the regulations and appeals of the U. S. Food Administration for the Army and our allies was carelessly if not criminally wasted when it reached the army kitchens.

Considerable of the damage of this propaganda has been offset by the personal visit of thousands of parents to the different camps and cantonments of the United States, but enough of the idea is still prevalent in the country to warrant J. W. Hallowell, of Mr. Hoover's personal staff, to direct Food Administrator George A. Prescott, of Michigan, to detail one of his organization to visit Camp Custer and make an official report on the food conditions, paying strict attention to the garbage waste and conservation of left-over foodstuffs.

CUSTER ADHERES TO "SLOGAN"

In no place in America is more respectful consideration given the U. S. Food Administration's slogan, "Food Will Win the War," than right here in Camp Custer. Food is the first essential, if anything it is more important than camp sanitation, because without food and plenty of it no army, or civilian population for that matter, can maintain their peace and contentment, much less their war morale. It was Napoleon who said, "An army travels on its stomach," and no truer military expression has ever been coined. That's why it is as necessary for food regulation and food conservation in both army and civil life to maintain, by competent distribution, a proper food supply for both forces, dividing the same in proportion to the physical needs of each. The feeding of a camp the size of Custer is a revelation in detail. For example, every man in Custer was allowed in June 46.77 cents for his day's rations. Few families could make the saving or live as well as these mess sergeants keep their men, and a soldier's portion of food is not to be compared with that given youngsters in the average home. The work of a mess chief is a science. They almost invariably come within their daily official allowance, but no attempt is made to have a surplus, the mess savings for the week being used for a "big feed" on Sunday, a sample menu of a recent Sunday dinner being made a part of this story to relieve anxious mothers of any worry about the boy's Sunday dinner. Of course the average big-blooded boy, true to his finer qualities, writes home the cooking is not like mother's, but be that as it may, his food is at least scientifically correct both as to preparation and substance, and as for cleanliness the army kitchen has no superior in the land, for the only reason it is not

[1] *Augusta Beacon*, Augusta, Michigan, July 19, 1918.

possible to make them more immaculate.

MUST PASS RIGID EXAMINATION

There are upwards of 150 kitchens at Camp Custer, all under the supervision of Captain Dunne. Cooks and bakers in these kitchens are given two months of intensive training by experts, and they must pass a rigid examination on food values and kindred subjects before they are placed in charge of the work. The purpose and scope of the work done by this school are the making of expert cooks and mess sergeants, many of whom have never had any previous experience along this line. Men when they enter the school are impressed with three things: nothing is to be wasted, cleanliness is absolutely insisted upon, and the food must be cooked properly with a view to its being eaten with satisfaction by the men. The method of cooking without waste for such a large number of men is very simple when understood. Every man is cautioned against taking more on his plate than he can eat. "There is plenty for all, but none to waste," could be adopted as the official slogan of the army cooks. A sergeant is stationed in the mess hall to prevent the practice of taking excessive portions and leaving a part of the food untouched on the plate. All that is left on the serving plates is utilized in some other dish. A good example of how this surplus is handled is shown in the use of left-over potatoes. For example, mashed potatoes are served for dinner and 15 pounds of the potatoes are not eaten. That night the menu will perhaps have potato cakes or baked potatoes with the left-over potatoes palatably worked into the evening mess.

ECONOMY PRACTICED TO LAST DEGREE

Economy in the use of foodstuffs in the kitchen is practiced to the last degree. When a quarter of beef is delivered to the kitchen it is immediately cut up, the bones and all fat removed. The bones are broken into small pieces and boiled, thus conserving all of the nutritious elements of the bones such as the fat contained in the marrow and the gelatin in the tendons and bones. This stock is used as a base for soups. All the fat is cut into very small pieces and put on the stove, rendering all of the fat from the solids. In this way a saving is made on the lard component of the ration as well as the money saving if the same lard had to be bought. Perhaps the fat thus cut from one quarter of beef will be sufficient for frying two or three meals of croquettes, in which left-over potatoes and meat are used, or the same number of meals of French fried potatoes, which, by the way, is one of the most popular dishes in the army. "The same practice of rendering all fat from beef, pork, mutton, etc., can be practiced in the average home just as well as in the army kitchen," said Lieut. John B. Snider, who was in charge in the absence of Captain Dunne, that officer being in Washington on official business at the time of the inspection. "Of course the quantities will not be as great. For example," he continued, when you have a steak, if you will cut all of the fat from the meat and render it and use only what is necessary for frying the meat you will be surprised to find you saved perhaps two or three tablespoons of fat which is just as good as lard for frying such foods as potatoes, hot cakes, etc., and at the same time saving the amount of lard or butter that would have been used had not the fat from the steak been conserved

as suggested. By using all of the fat from beef, pork, etc., you are not only saving money in your own kitchen, but are helping our cause by saving commercial fats for the use of our fighting men in France and in training in this country. This may seem trifling, but it is the little savings, a practice very essential in most homes, that will do as much to win the war as some of the things that sound larger and seem more important. Kitchen economy means more money to invest in government securities, so you see this home saving is as essential as the regulation of the public eating places which is done by official order.

A daily inspection of the garbage cans from the kitchens, feeding perhaps 250 big husky boys, will show less waste than there is from the kitchen of a family of six for the same period. The garbage is divided into five parts: (*a*) Ordinary garbage; (*b*) bones and fats; (*c*) cans and unbroken bottles; (*d*) coffee grounds, tea leaves and dirty paper; (*e*) clean ashes. By this system the parts worth saving are not wasted through being mixed with negative materials. Try Lieutenant Snider's idea of using left-over foods. You will be surprised at the ease with which they may be used. The Department of Agriculture, Washington, usually has a large number of bulletins regarding the use of such foods, and these bulletins are supplied free for the use in the homes. Write to the Department explaining what you want in the line of these bulletins and they will be sent you free.

DAILY INSPECTIONS OF KITCHENS

The method of securing cleanliness in the kitchens and mess halls is very simple. At least one inspection of the kitchens is made daily by a commissioned officer attached to the school and perhaps another inspection is made by a noncommissioned officer. The men are inspected as to their personal cleanliness, particular care being taken to inspect the hands and fingernails. The men who handle the food are required to scrupulously clean their hands and fingernails every time they handle anything that is likely to dirty them in the least. The sanitation of the army kitchen and its employes surpasses 90 per cent of the best hotels, and in these places you never once think of that side of their management. The men are inspected twice a month by a medical officer to determine whether any of the men are suffering from any infectious disease. If any of the men are found with any kind of a contagious disease they are promptly removed from the kitchen until pronounced free from the disease by physicians. An inspection is made of all shelves, tables, refrigerators, etc., which, if found to be untidy or dirty, are ordered cleaned at once. If any kitchen is found to be continually dirty, the cooks on shift are denied passes for a period varying from perhaps two weeks to a month. Thus the men, if they expect to have any privileges at all, have to keep their bodies as well as their kitchens clean. There is no warning as to when inspections are to be made, so the spirit of cleanliness is constant. The tables in the mess halls are scrubbed after each meal and the kitchen floor is scrubbed twice a day. It may readily be seen why there is so little sickness in the Army; in fact, the Custer health record for May was the

best of any of the camps in the United States.

METHOD OF PREPARING FOOD SIMPLE

The method of preparing the food in such a satisfactory manner and to give the soldiers a variety is simple. All men going into the kitchen are given a copy of "Extracts from the Army Cooks Manual," giving the recipes and showing the quantity to be prepared for a given number, usually 60 or 100 men. Thus the amounts to be prepared can be figured very accurately, and as a rule there is perhaps not more than 2 or 3 pounds of anything left if the mess sergeant has followed his instructions properly, and the food prepared in a palatable manner so the men will eat it. The use of seasoning and condiments is emphasized in the "prep" school, for without the proper use of such the food is untasty and not relished. "The test of a good cook is in the use of his seasonings," is what Captain Dunne tells all the candidates for mess job.

One cannot be called a good cook until he has become familiar with the use of such spices as mace, cinnamon, nutmeg, allspice, etc. By using one's ingenuity a great many palatable dishes can be made from left-overs with the addition of perhaps a little fresh raw material. If rice is served and four or five pounds left over, by adding about ten pounds of fresh cooked rice and a few raisins, eggs, sugar, etc., a fine rice pudding can be produced for 200 men. When a cook finds out the likes and dislikes of the men he is cooking for he can use those dishes they like and omit the dishes that they do not care so much for, thus keeping at all times a satisfied company of men as far as the mess is concerned and the best fed soldier is always the best fighter.

The men in this country are fed perhaps a little better than they are over in France owing to the facilities for cooking being better here, but reports from France from any number of enlisted men will show that they are getting plenty to eat and are all satisfied. "The men at Custer and all other camps are getting food which could not be improved upon at home very much," says Lieutenant Snider. For instance, a recent sample of a day's bill of fare from one of the companies follows:

BREAKFAST

Oranges Bananas
Shredded Wheat and Milk
Scrambled Eggs Boiled Potatoes
Bread Butter Coffee

DINNER

Split Pea Soup
Boiled Beef Creamed Dumplings
Mashed Potatoes String Beans
Creamed Corn
Combination Salad
Bread Butter Coffee

SUPPER

Baked Beef Hash
Hashed Brown Potatoes
Hot Parker House Rolls
Butter Coffee

Note the variety, and the above is merely a sample of the average menu which for balance and nutriment would be hard to equal in a good many homes. A constant variety is given the men so that they will not become tired of any particular dish. Baked navy beans are a good substitute for the beef component at times. The nutrition obtained from macaroni and cheese is more than beef, and that dish is always a favorite in the army. The principal idea is to give the men a balanced ration so that they will get all the different elements required to keep them in the pink of condition. Too much fat

is not healthy; neither is too much protein, nor an excess of carbohydrates.

LARGEST LAUNDRY IN MICHIGAN

Next to the 100 per cent plus sanitation methods insisted upon in connection with the preparation, cooking and serving of the food, the most important item in the program of camp cleanliness is the laundry. The plant is said to be the largest laundry in Michigan, which claim is probably correct, inasmuch as the average city of forty thousand supports several laundries, not taking into account the number of people who have hired their washing done and the still larger majority who do their own laundry work. The Camp Custer laundry does all the work of the camp, and the magnitude of the organization cannot be understood short of a personal visit. One day the plant did 7,204 army blankets "extra" without interfering with their regular wash, which gives some idea of the magnitude of the enterprise, as most housewives know what it means to have one extra blanket in the week's wash. The officers pay for their work at the regular down-town custom rates, while the cost of this service to the noncoms and privates is one dollar a month, regardless of the number of pieces. It is rather the rule for a soldier to have at least two washings a month that would exceed the dollar limit if done outside the camp.

Custer has its own storage and refrigeration plant which, like the laundry, is sufficient to meet the complete needs of a city of forty thousand. The ice plant turns out forty thousand pounds a day. The plant is being operated by soldiers formerly in the ice manufacturing business at Flint. The camp never has to exceed three days' meat supply on hand. This meat is unloaded at the doors of the refrigeration plant, where it is inspected by Lieut. D. S. Luce, a Wisconsin man, notwithstanding it has been previously inspected by federal agents at Chicago. Only the choicest cuts are bought, and the June beef supply was the most expensive meat ever served to any army. No meat is bought from any dealer who does not come within the jurisdiction of the federal inspection bureau, which practically confines the market to the Chicago packers.

Model Menu

THIS model menu was prepared by Lieut. Col. M. L. Crimmins, commanding the development battalion at Camp Fremont, California. It has been in use for some nine months and has been found to fill the purpose for which it was intended. It teaches how to use the ration economically, practically and efficiently. Most of the mess sergeants and company commanders have had no previous experience in handling the ration, and can take time to learn only by neglecting other duties.

A larger allowance of bread has been used than may be customary. It can be reduced. A saving of about $6 a day is allowed per hundred rations; this saving can be used to purchase fresh fruits or vegetables when in season or in such way as the company commander may direct. One officer did the buying for all the messes, and by buying direct from the wholesale dealer made savings on local retail prices that ranged from 10 to 33 per cent.

If it is hard for an officer of the regular service to work out a good ration from the "Cooks' and Bakers' Manual," it must be harder for those of less experience in such matters. Those who have never really tried to put their manual into practical use do not appreciate this. Of course it can be so used; it should be studied, not merely read over, but this takes time and there is so much to be done. This menu has been worked out by an officer who has found it successful in practice, and others confronted with the same difficulties will find it of assistance to them.

MODEL MENU[1]

Twenty-one Different Meals

This menu, covering a period of one week, is figured on a basis of one hundred men. Messes of different strength will determine proportions by using the following formula:

$$\frac{\text{Quantity for 100 men}}{100} \times \text{number of persons} = \text{quantity to use.}$$

Estimates are based on the following sized cans:

Salmon, Corn, Peas	No. 1 can.
Syrup, Apples, Pumpkins	No. 10 cans.
Tomatoes	No. 3 cans.

Other articles in pounds, except extracts in ounces and eggs by the dozen.

[1] Arranged from Q. M. Price List for September, 1918, at Camp Meade, Maryland, by Lieut. Col. M. L. Crimmins, U. S. A.

SATURDAY–SUNDAY

Menu		Ingredients	Cost
		Supper	
Macaroni and cheese	15	macaroni, $1.58; 5 cheese, $1.21; ½ salt	$2.79
Stewed corn	1	lard, $0.28; 1 flour, $0.052; 15 corn, $1.588; 2 milk, $0.33	2.25
Pudding	8	sugar, $0.58; 4 milk, $0.66; 4 corn starch, $0.20	1.44
Vanilla sauce	4	sugar, $0.29; ½ corn starch, $0.03; ½ vanilla, $0.03	0.35
Tea	5	sugar, $0.36; ½ tea, $0.15	0.51
Bread	30	bread, $1.16	1.16
		Cost of supper	$8.50
		Breakfast	
Post toasties	8	post toasties, $0.80	$0.80
Sausage	30	sausage, $14.02	14.02
Syrup	1½	syrup, $0.87	0.87
Coffee	6	sugar, $0.44; 3 milk, $0.50; 4 coffee, $0.48	1.42
Biscuits	3	lard, $0.84; 17 flour, $0.89; 1 baking powder, $0.19	1.92
		Cost of breakfast	$19.03
		Dinner	
Roast beef and gravy	40	beef, $9.26; 2 lard, $0.56; 3 flour, $0.15; 3 onions, $0.09; 2 tomatoes, $0.25	$10.31
Potatoes	35	potatoes, $1.06	1.06
Bread pudding	6	sugar, $0.45; 20 bread, $0.78; 4 milk, $0.66; ½ vanilla, $0.04; 2 eggs, $0.90; 2 raisins, $0.16	2.99
Cocoa	5	sugar, $0.36; 3 cocoa, $0.34; 3 milk, $0.50	1.20
Bread	30	bread, $1.16	1.16
		Cost of dinner	$16.72
		Total cost for day	$44.25

Value of ration	$0.4841
Value per 100 men	$48.41
Cost for day	44.25
Savings for day	$4.16

SUNDAY–MONDAY

Menu		Ingredients	Cost
		Supper	
Soup, vegetable	5	potatoes, $0.15; 2 tomatoes, $0.29; 2 peas, $0.20; 5 macaroni, $0.53	$1.17
Beef hash	20	beef, $4.80; 15 potatoes, $0.45; 5 onions, $0.15	5.40
Potatoes, baked or fried	1	lard, $0.28; 35 potatoes, $1.06	1.34
Peaches, stewed	4	sugar, $0.28; 10 peaches, $1.70; ½ lemon extra, $0.03	2.01
Bread	30	bread, $1.20	1.20
		Cost of supper	$11.12
		Breakfast	
Mush	5	sugar, $0.35; 12 cornmeal, $0.56; 5 milk, $0.83	$1.74
Beefsteak, fried	35	beef, $8.40; 3 lard, $0.84; 2 flour, $0.10; 5 onions, $0.14	9.48
Potatoes	1½	lard, $0.42; 35 potatoes, $1.05	1.47
Coffee	8	sugar, $0.56; 4 milk, $0.66; 4 coffee, $0.44	1.66
Bread	25	bread, $1.00	1.00
		Cost of breakfast	$15.35
		Dinner	
Beans, baked	2	tomatoes, $0.28; 25 beans, $3.00; 5 bacon, $2.06; ½ syrup, $0.29	$5.63
Pickles	½	pickles, $3.25	3.25
Pudding	5	sugar, $0.35; 4 milk, $0.66; 8 rice, $0.64; ½ vanilla, $0.03	1.68
Cocoa	5	sugar, $0.35; 3 cocoa, $0.34	0.69
Corn bread	1	lard, $0.28; 8 flour, $0.40; 2 sugar, $0.14; 8 corn meal, $0.37; 1½ syrup, $0.87; ¼ baking powder, $0.05	2.11
		Cost of dinner	$13.36
		Total cost for day	$39.83

Value of ration	$0.4841
Value per 100 men	$48.41
Cost for day	39.83
Savings for day	$8.58

MONDAY–TUESDAY

Menu		Ingredients	Cost
		Supper	
Liver, fried	3	lard, $0.84; 3 flour, $0.15; 35 liver, $5.60; 10 onions, $0.30	$6.89
Potatoes, creamed	35	potatoes, $1.05; 4 milk, $0.44	1.49
Peas, stewed	2	flour, $0.10; 2 milk, $0.22; 14 peas, $1.40	1.72
Tea	5	sugar, $0.36; 9 ounces tea, $0.15	0.51
Bread	30	bread, $1.20	1.20
		Cost of supper	$11.81
		Breakfast	
Beef, chipped	3	flour, $0.15; 4 milk, $0.44; 20 beef chipped, $5.00; 1 butter, $0.43	$6.02
Wheat biscuit, toasted	4	sugar, $0.28; 3 milk, $0.33: 3 butter, $1.30; 9 biscuit, $0.90	2.81
Coffee	6	sugar, $0.43; 3 milk, $0.33; 4 coffee, $0.48	1.24
Bread	30	bread, $1.20	1.20
		Cost of breakfast	$11.27
		Dinner	
Fish	4	lard, $1.12; 4 flour, $0.20; 50 fish, $8.00	$9.32
Potatoes	35	potatoes, $1.05; 3 milk, $0.33; 2 butter, $0.87	2.25
Beans	15	beans, $2.40; 4 bacon, $1.64	4.04
Pudding, tapioca	4	sugar, $0.29; 5 milk, $0.55; 8 tapioca, $1.00; ½ lemon extract, $0.03	1.87
Cocoa	5	sugar, $0.37; 3 cocoa, $0.33	0.70
Bread	30	bread, $1.20	1.20
		Cost of dinner	$19.38
		Total cost per day	$42.46

Value of ration	$0.4841
Value per 100 men	$48.41
Cost for day	42.46
Savings for day	$5.95

TUESDAY–WEDNESDAY

Menu		Ingredients	Cost
		Supper	
Stew, Irish	25	beef, $6.00; 1 flour, $0.05; 10 onions, $0.30; 2 milk, $0.22; 5 carrots, $0.50	$7.07
Cabbage salad	2	sugar, $0.14; 25 cabbage, $0.87; ½ vinegar, $0.16	1.17
Apple stew	4	sugar, $0.28; 8 apples, $0.84; 1 cloves, $0.14	1.26
Apple butter	5	apple butter, $0.40	0.40
Tea	5	sugar, $0.35; 3 milk, $0.33; 3 tea, $0.84	1.52
Bread	30	bread, $1.20	1.20
		Cost of supper	$12.62
		Breakfast	
Farina	4	sugar, $0.28; 3 milk, $0.33; 8 farina, $0.80	$1.41
Hamburg loaf	30	beef, $7.20; 3 onions, $0.09	7.29
Gravy	2	flour, $0.10; 1 butter, $0.44	0.54
Potatoes, cottage fried	1	lard, $0.28; 25 potatoes, $0.75	1.03
Coffee	6	sugar, $0.42; 4 milk, $0.44; 4 coffee, $0.48	1.34
Bread	30	bread, $1.20	1.20
		Cost of breakfast	$12.81
		Dinner	
Chile-con-carne	25	beef, $6.00; 6 Chile sauce, $1.44; 6 Chile beans, $0.90.	$8.34
Potato salad	30	potatoes, $0.90; 5 onions, $0.15; ½ vinegar, $0.16; ½ mustard, $0.10	1.31
Peach cobbler	1	lard, $0.28; 3 flour, $0.15; 2 sugar, $0.14; 8 peaches, $1.36	1.93
Cocoa	5	sugar, $0.35; 3 milk, $0.33; 3 cocoa, $0.33	1.01
Bread	30	bread, $1.20	1.20
		Cost of dinner	$13.79
		Total cost for day	$39.22

Value of ration	$0.4841
Value per 100 men	$48.41
Cost for day	39.22
Saving for day	$9.19

WEDNESDAY–THURSDAY

Menu		Ingredients	Cost
		Supper	
Baked hearts	2	lard, $0.56; 20 bread, $0.80; 35 hearts, $5.50	$6.86
Potatoes (baked in jackets)	35	potatoes, $1.06	1.06
Pumpkin pie	4	lard, $1.12; 6 flour, $0.30; 5 sugar, $0.36; 4 pumpkin, $1.60; 2 eggs, $0.90	4.28
Tea	5	sugar, $0.36; ½ tea, $0.15	0.51
Bread	30	bread, $1.20	1.20
Butter	5	butter, $2.17	2.17
		Cost of supper	$16.08
		Breakfast	
Oatmeal	5	sugar, $0.36; 12 oatmeal, $0.98; 5 milk, $0.55	$1.89
Beef, braised	30	beef, $7.20; 3 lard, $0.84; 10 onions, $0.30	8.34
Potatoes, fried	2	lard, $0.56; 35 potatoes, $1.06	1.62
Coffee	6	sugar, $0.44; 3 milk, $0.33; 4 coffee, $0.48	1.25
Bread	30	bread, $1.20	1.20
		Cost of breakfast	$14.30
		Dinner	
Beef a la Mode	35	beef, $8.40; 1 lard, $0.28; 5 onions, $0.15; 5 carrots, $0.36	$9.19
Potatoes, boiled	35	potatoes, $1.06	1.06
Rice, steamed	4	milk, $0.44; 10 rice, $0.80; ½ cinnamon, $0.03	1.27
Apple butter	5	apple butter, $0.40	0.40
Coffee	6	sugar, $0.44; 4 coffee, $0.48	0.92
Bread	30	bread, $1.20	1.20
		Cost of dinner	$14.04
		Total cost for day	$44.42

Value of ration	$0.4841
Value per 100 men	$48.41
Cost for day	44.42
Saving for day	$3.99

FRIDAY–SATURDAY

Menu		Ingredients	Cost
		Supper	
Beef, Spanish	35	beef, $8.40; 4 tomatoes, $0.57; 8 onions, $0.24	$9.21
Potatoes (au Gratin)	30	potatoes, $0.90; 5 milk, $0.55; 3 cheese, $0.72	2.17
Peaches, stewed	4	sugar, $0.28; 12 peaches, $2.04; 1 lemon ext., $0.06	2.38
Tea	5	sugar, $0.35; 3 milk, $0.33; ½ tea, $0.14	0.82
Bread	30	bread, $1.20	1.20
		Cost of supper	$15.78
		Breakfast	
Post toasties	5	sugar, $0.35; 3 milk, $0.33; 5 post toasties, $0.50	$1.18
Codfish, creamed	18	codfish, $4.32; 5 milk, $0.55	4.87
Potatoes	18	potatoes, $0.54; 1⅔ eggs, $0.75	1.29
Coffee	6	sugar, $0.43; 3 milk, $0.33; 4 coffee, $0.49	1.25
Bread	30	bread, $1.20	1.20
		Cost of breakfast	$9.79
		Dinner	
Frankfurters	40	frankfurters, $8.00	$8.00
Kraut	30	kraut, $1.80	1.80
Prunes, stewed	4	sugar, $0.28; 12 prunes, $0.99; 1 cinnamon, $0.07	1.34
Cocoa	5	sugar, $0.35; 3 milk, $0.33; 3 cocoa, $0.33	1.01
Bread	30	bread, $1.20	1.20
		Cost of dinner	$13.35
		Total cost for day	$38.92

Value of ration	$0.4841
Value per 100 men	$48.41
Cost for day	38.92
Savings for day	$9.49

SAVINGS FOR WEEK

Saturday–Sunday	$4.16
Sunday-Monday	8.58
Monday–Tuesday	5.95
Tuesday–Wednesday	9.19
Wednesday–Thursday	3.99
Thursday–Friday	1.17
Friday–Saturday	9.49
Total	$42.53

NOTE: Menu for Thursday-Friday omitted. The author states that the sugar ration can be reduced by substituting cane syrup or molasses. This has been tried with good results.—*Editor.*

The German Machine Guns[1]

A FEW days ago the official report remarked that it was our machine guns especially that had broken the force of the British attack. It is they that do the bulk of the work in the defensive battle in our mobile defense as well as in attack or counter-attack. We shall discuss them here. Each regiment has three machine-gun companies under a machine-gun officer on the regimental staff. There is a company to each battalion. The machine guns are drawn by two horses. These are the so-called heavy guns. Each company has nine of these effective weapons, six in action and three in reserve. Each regiment in addition has a large number of light machine guns which require only two men. They are distributed among the companies. This light gun is the so-called pom-pom (Trommelgewehr). We call them *Muskete*. When fired, this light gun is placed upon a collapsible tripod.

The heavy machine guns are not used in the foremost lines in the defensive; that is, during the present battle. In keeping with the great depth of our position, they are placed singly and concealed as much as possible. They are to remain hidden as long as possible and have to be guarded from destruction by the enemy artillery. If one side attacks or carries out a counter-attack in the course of the defense, the first attacking waves are accompanied by light machine guns. Only later are the heavy machine guns brought out to support them to cover, if possible, the battlefield from commanding points. They open fire as late as possible to prevent their location being betrayed by the steam which arises. Their task is to keep down the enemy machine guns. In a counter-attack by the enemy they act automatically as a support of the defense. Their commanders are equipped with good glasses to enable them to spot enemy machine guns. The range of machine guns used in this way is up to 1,000 yards. Their devastating effect is felt between 400 and 600 yards. If a machine gun is moved, two men carry the gun and two others the ammunition. Machine guns therefore form the framework of the attack or the defense. They are, so to speak, the skeleton of infantry activity. The work of the machine gunners therefore requires extraordinary independence in decision and special intelligence. Bravery is obviously necessary with these troops. The machine gun has become a terrible weapon in the defense. The British learned this in Artois and Flanders, and the French on the Aisne, and both can now tell of it in the great battle in France.

We must mention the precautions taken against tanks. These are fought with machine guns and special guns of large caliber, with armor-piercing shells. Hand grenades have proved particularly effective against the little tanks, and they bring them to a standstill. Machine guns are also of great importance in fighting aeroplanes. Each battery has two machine guns for this purpose which can come into action while the

[1] From the *Vossische Zeitung*, August 22, 1918.

battery is in motion, in order to keep at a distance the troublesome enemy, who has recently become most impudent. The air range of machine guns is about 2,500 feet. They can shoot when they can make out the head and face of the observer. This is the easiest test of range. The machine guns have had great success against the enemy battle planes. The infantry knows this and is grateful. One may say that the machine guns are having the decisive effect in the present battle. An intact, well-directed machine gun can hold up an attack 500 yards to left or right and cause it to break down. To advance against a fully manned machine gun in action seems a sheer impossibility. To fight machine guns the light trench mortars are used which are allotted to the infantry and the batteries accompanying the storming troops. The main thing about the machine guns is the independence of the noncommissioned officer in charge, for whose training the machine-gun officer of the regiment is responsible. Divisional *Scharfschützen* sections have also machine guns and are distributed as required.

The machine guns are playing an extraordinary part in the present struggle. We can rely upon them and their gunners. Since the battle of the Somme it has been mainly they which have prevented every break through of the German lines. The importance of the machine gun is increasing in the new tactics, which depend more than ever on mobility, independence and depth of grouping. The higher intelligence and the greater intellectual training of the individual are becoming the decisive factor. The German schoolmaster and general education are once again defeating a numerically superior enemy.

So far the titanic struggle is simply a tactical event. Foch would like to change it into a strategical success. The German machine gun will upset his calculations. This small terrible weapon, in the hands of tried noncommissioned officers and skillful gunners, is breaking the onslaughts of the peoples massed against us. Little David is beating the big Goliath once more.

Prevision for the Post-bellum Army

By Lieut. Col. John Delbert Reardan, Air Service

IN VIEW of the showing made by Germany during the past four and one-half years, it may be considered fortunate indeed for this country that we escaped any necessity for pitting our lone power against that of Germany. Even now, when we are only one of many nations arrayed against the Central Powers, we realize that we owe a great debt of gratitude to Spain, and even to tempestuous Mexico, for the occasions they have given us for developing at least a fit nucleus for an army.

For many years after the Civil War this country displayed a profound apathy toward the development of any permanent military force. The reaction from those four years of military activity resulted in an extreme curtailment of all adequate military provision for the nation. Not until the little flurry in 1898 stirred the country up a bit was anything done toward proper development. From then until the present war began the progress made was gradual, resulting in a growth from a force of 25,000 trained men to one of 218,000 men; and, what was far more important, witnessing the evolution of our methods of training from the antiquated practices of Indian fighting to those of the modern school.

Since the beginning of the war, advance by leaps and bounds has been made in army development, both as regards size of the force and methods of training. However, if we do not wish to slip back after this war into a state resembling that which prevailed after the Civil War, we must take advantage of the wonderful opportunities this war affords for making provision for the future of our national military force. The purpose of this article is to provoke suggestions calculated to secure such provision. The procedure outlined herein is simply tentative and is presented in the hope that it will crystallize opinion on these matters, open discussion, and result in the formulation of an announced policy with regard to them.

In these days of gigantic expansion and resultant rapid promotion, the subalterns of the old army have become the commanders of the new, and in their places we have subalterns lacking, in most instances, the training and traditions which were ingrained in their predecessors. West Point, the most prolific source of supply for the junior grade of the commissioned personnel, has lost, for the time being, much of its potency to produce subalterns imbued with the finest army traditions, due to the reduction of the course from four years to one year.

Inasmuch as the character and ideals of the junior officers of the army decisively determine its fiber, morale, and *esprit de corps,* it becomes imminently incumbent upon us to make provision for the replacement of the highly qualified subalterns we have lost due to the causes cited above. This is one of the problems for which the war conditions that caused it provide also the opportunity for successful solution. Who more qualified to understand what constitutes the qualities desirable in a valuable subaltern than the officers who were themselves the valuable subalterns of the army for from ten to fifteen years? They remember what was required of

them, and their experiences are indelibly impressed upon their minds in letters of fire.

Then, too, as was previously observed, the subalterns of yesterday are the commanders of today, and so are in a position to observe intimately the timbre suitable for future subalterns—to select the men who show by their attitude toward the service an inherent "flair," or peculiar adaptability, for the duties of a subaltern; those whose age, educational qualifications, connections, physique, and predisposition to the military profession render them exceptionally well qualified to become subalterns in the permanent military establishment. The possession of these qualities is best determined by a constant association and observation in the relation of commander and subordinate. Boards selected for such a purpose at the termination of the war would necessarily be at a tremendous disadvantage in deciding these vital factors with only a day or two for observation of candidates.

In order that the experience of those qualified to pass upon these qualifications may be made available for the use of such agencies as may later be called upon to select junior officers for the permanent military establishment, a system of special reports should be adopted. All officers of the Regular Army below the grade of brigadier general who have served as subalterns for five or more years should be required to report to the personnel section, Adjutant General's Office, any officer whom they have had under their command and observation for six months or longer who has shown qualities which render him suitable to become a subaltern in the permanent establishment—these reports to be rendered December 31, 1918, and thereafter semi-annually, and filed in the Adjutant General's Office for use later in the final determination of this question.

It is thought that these reports would not duplicate anything along these lines now being submitted, for the reason that the standard of judgment would be so entirely different from that employed at present in rating officers. By our present system the officers most likely to fulfil the above requirements for subalterns are frequently reported upon by officers of less than a year's service. The judgment in such cases is not based on the subtle, indefinable considerations which would be brought to bear by an officer of years of experience in the junior grades. A suggested form for the report recommended above is given below:

RECOMMENDATION FOR COMMISSION
PERMANENT ESTABLISHMENT

Name .....
Rank .....
Age .....
Married .....
Previous occupation.....
Occupation of father.....
Of adult brothers.....
Personal qualities:
  Personal habits.....
  Attitude toward military profession.....
  .....
  Adaptability .....
  Attitude as subordinate.....
  .....
Physical qualities:
  Physique .....
  Endurance .....
  Military bearing.....
  Alertness .....
  Neatness .....
Grade for which recommended.....
In what branch of service? .....
.....
(Signature of officer making recommendation)
.....
Rank Arm of service

There was another class of men in the old Regular Army whose loss will have, perhaps, a more significant effect on the army of the future than the loss to it of experienced subalterns. The "old-timer" first sergeants and duty sergeants (of whom officers were wont to say "they are the backbone of the army") have become officers for the period of the emergency. It is unlikely that many of them will revert to their former duties unless something is done to improve the status of these noncommissioned grades.

However, the war, great shuffler of men that it is, offers a means of replacing those who fail to return to their noncommissioned status. Men having qualifications which especially fit them for these positions finally land in them. They are the type of man who does not shoot at the stars but is content to fill a useful rôle on a lower plane—men of sterling character, forceful, intelligent and resourceful, whose ambition is not constantly nagging them to seek something higher.

At the conclusion of hostilities the records will show which of the men holding these positions have held them satisfactorily for a year or more. It is then only a question of offering them sufficient inducement, in the way of adequate pay and suitable quarters, to keep them with the colors. A status for them similar to that of the warrant officers of the Navy would no doubt meet the situation. It is believed that such provision would also induce many of the officers who formerly served as noncommissioned officers to accept their old positions in the service, who otherwise would go into civil life.

Another condition which will require prompt attention after the termination of the war is that which will result from our present system of promotion by selection. This system will affect the antebellum commissioned personnel in two ways. First, it will cause many officers who have been passed over to seek to leave the service soon after our present emergency is met. On the other hand, many who have received rapid promotion to the higher grades will feel a natural slump upon reverting to a much lower grade and lesser sphere of activity in the comparative quietude of peace times. Still a third class which will lose in efficiency comprises those whom the terrible experiences of the war will leave broken in both spirit and health.

None of these three classes of officers is blamable for what has been, simply, the result of the exigencies of the service. Years ago, on the threshold of virile manhood, they dedicated themselves to a life of service, of training, and of preparation for just such an emergency as the one that has now overtaken us. Surely they have earned the fullest consideration of a grateful nation. Let us make no mistake as to the form this gratitude shall take. During the highly impressionable period following a great war, the country can ill afford to retain in positions of great influence officers who are below their maximum efficiency. In the light of a fifty billion dollar war it would be inexpedient to balk at expense when it is a question of securing an assured future for our military personnel.

Without doubt, what the American Army will be a hundred years from now will be determined largely by what the veterans of this present great war make of it in the years immediately succeeding the treaty of peace. Therefore, to hold in service in the higher grades of-

ficers whose influence is not wholly and actively beneficial and inspiring to the men under them is to do the Army a serious injury.

For this reason, if such officers find themselves unable to regain their keenness and zest for their profession, they should be encouraged to retire by modifying the present retirement laws in such a way as to afford suitable provision for their retirement. They have earned this much by their faithful service during the war, and, more than all, they are entitled to it because of their part in the inception and development in the ante-bellum army of the potent leaven which has so efficiently leavened the whole great war-time army.

And it would seem that the extent to which these officers contributed to the training and preparation of the Army, as measured by their years of service, might justly be taken as the basis of the terms on which they will be encouraged to retire. The scale suggested below approximates similar scales previously published, but is more liberal to the older officers, on account of the considerations stated above.

However, it is a radical departure, in that it provides a fixed scale of pay, according to length of service, regardless of grade held at date of retirement, for all officers below the grade of brigadier general. This proposal considers two principles that have long been advocated by the majority of officers, namely, promotion for length of commissioned service to all grades below that of general officer, and promotion by selection from the colonels of the army to the grade of brigadier general.

In order to safeguard the interests of the Government, only those officers whose average for all ratings equals, or exceeds, 45, computed by the present method of rating, should be allowed to avail themselves of the provisions of

PROPOSED SCALE

Table of Pay Allowed by Law to all Officers of the Army below the Grade of Brigadier General, after Their Voluntary Retirement from Active Service

Service in permanent establishment

	Pay after voluntary retirement[1]		Graduates of West Point	For first two years' term and for each term additional five years' term of enlisted service.
	Yearly	Monthly		
After 5 years' service..... (*Note:* Equals 20% of pay	$440.00 of first lieu	$36.67 tenant with	10% additional five years' servi	10% additional ce.)
After 10 years' service..... (*Note:* Equals 33⅓% of pa	$960.00 y of captai	$80.00 n with ten	10% additional years' service.)	10% additional
After 15 years' service..... (*Note:* Equals 50% of pay	$1560.00 of captain	$130.00 with fiftee	10% additional n years' service.)	10% additional
After 20 years' service..... (*Note:*-Equals 60% of pay	$2400.00 of major w	$200.00 ith twent	10% additional y years' service.)	$240.00 monthly max.
After 25 years' service..... (*Note:* Equals 75% of pay	$3375.00 of lieutena	$281.25 nt colonel	$281.25 with twenty yea	$281.25 rs' service.)
After 30 years' service..... (*Note:* Equals 75% of pay	$3750.00 of colonel w	$312.50 ith twent	$312.50 y years' service.)	$312.50

[1] Voluntary retirement is dependent upon whether the services of the officer can be spared by the Government.

the above table. Those who fall below that average should be disposed of as now provided for officers other than those of the permanent establishment.

It will be observed that the table considers only voluntarily retirements. It is believed, however, that the law covering retirements on account of disability incurred in line of duty should be sweepingly revised. As it stands now a man with one year's service, slightly incapacitated at the age of twenty-two, could, under conceivable conditions, be retired with as much pay as a man with twenty years' service, *totally* incapacitated at the age of forty.

A more equitable provision would be to base the percentage of retired pay on the *degree* of disability, as determined by a board of medical officers, using a system similar to that employed in determining the amount of compensation to be paid, under the Act of October 6, 1917. Under such provision an officer should be permitted to avail himself of voluntary retirement, should it be to his advantage to accept it, rather than retirement for disability on the basis determined by the board of medical officers.

Such an amendment of the retirement laws, as applying to commissioned officers of the Regular Army, seems a necessary corollary of the proposed law for voluntary retirement, and a logical expansion of the wise policy inaugurated by the passage of the Act of Congress approved October 6, 1917.

Camouflage

IT IS safe to say that the general methods of camouflage are the same in all armies. The following directions for its execution are from a German source and are dated last summer. The purpose is to provide against effective air observation, and as they have to be carried out by the whole of a command, it is obviously expedient that as many men as possible should know what camouflage is for and how the objects of it are to be attained.

ESSENTIAL POINTS IN THE CONSTRUCTION OF POSITIONS

1. *General.*—(*a*) Camouflage will be completed before undertaking the work.

b. Camouflage will be sufficiently extensive in order that all the work required may be carried out under its protection.

c. Faulty installation will be left in place as dummy work and will be begun over again somewhere else with the necessary care.

2. *Tracks.*—(*a*) Tracks must be as few as possible and have a natural appearance. It is best to avoid all tracks by building the position on a road already in existence.

b. Provide fixed access for everybody. If necessary, stake out the paths by means of wire.

c. Extend indispensable tracks beyond the position as far as the dummy work.

d. Use furrows as paths; do not go across fields.

e. Do not dump materials in the immediate neighborhood of the position.

3. *Color of the Camouflage.*—(*a*) Harmonize the color of the camouflage with the terrain—green camouflage in meadows, brown in ploughed fields, white in quarries.

b. The upper surface of the camouflage will be in alternate light and dark tones—grass, reeds, hay or branches fixed in iron wire, etc.

c. Renew the camouflage in proper time; the grass and branches fade quickly and appear light and not dark in the photographs.

d. The position must not extend partly over one field and partly over another, as two fields are seldom of the same color. The furrows will be reproduced in the camouflage.

e. The camouflage materials, such as sod and small trees, will be taken at a distance of at least 300 or 400 meters from the position; place the dummy work at a sufficient distance to prevent it from revealing the true position.

4. *Forms of Camouflage.*—(*a*) Do not raise the height of the camouflage needlessly. The higher it is the more shadow it throws. Raise it by means of posts during the work; bring it down by day and lay it flat if possible; cover mainly the entries and exits.

b. Do not make a heap of the earth removed, but scatter it immediately.

c. There must be no fresh cuts visible, as marked contrasts result from it between the light and dark surfaces, the latter appearing as deep shadows on the ground.

d. Avoid regular shapes and rectangular outlines.

e. Do not change natural shapes. Positions in fills and embankments must

not change the form of the fill or embankment.

f. Use the roads, fills, embankments, slopes, sunken roads, edges of woods to a great extent. Deceive the enemy by false tracks ending in woods.

MAIN INSTRUCTIONS FOR COLUMNS

1. Resting columns, location and nature of halting places. The most important thing is that the halting place should be of irregular form.

a. It is best to distribute the columns irregularly under trees of gardens, avenues, roads and courtyards, even if they are not very dense.

b. The camouflage of wagons and artillery pieces by means of branches does not secure them from reconnoissance by airplanes, when the column is in the open on light-colored ground, as, for example, on dry roads. Shadows enlarge in a surprising manner.

c. In villages, keep close to the walls, houses, enclosures of gardens and hedges, but, if possible, with irregular distribution. The best side is always the north side of houses, walls, etc., on account of the shadow.

d. In small courtyards, the wagons are lined up one beside the other and the tarpaulins are joined to form a roof. This appears on the photograph as a smooth and very natural surface which does not attract the enemy's attention.

e. In broken country seek the protection of the ground—the north side of embankments, hollow roads, hedges, etc. When there is no cover, very irregular distribution is required. Contrary to what has been said above, camouflage with branches is recommended when the ground is green; these branches will, if possible, be formed with a regular curtain and extend to the ground so that the shadow is diminished and weakened.

f. Lessen the tracks if possible. Do not widen the roads of approach needlessly. Follow the track. Mark out footpaths, staking them out, if necessary, by wire.

2. Troops on foot, wagons and artillery columns on the march.

a. Even at night make great use of tracks, which are generally dark; the columns can then with difficulty be observed by airplanes. On the other hand, columns on roads which appear light can be seen even at night.

b. Infantry columns will be divided into small groups distributed in depth and advanced along the shady side of roads.

c. When airplanes use light projectors at night, keep in the shade of trees or buildings.

GENERAL RULE

When surprised by airplanes, either by day or night, use all natural shade provided by trees, embankments, houses, etc., and remain motionless.

The German Retreat from the Marne[1]

THE battle was not distinguished by any special tactical characteristics, although the initial surprise attack was unusual, owing to the enemy use of tanks. The German attacks this year have been initiated by a new and surprising use of artillery. Foch began his counter offensive by employing an enormous number of tanks, the artillery being completely in the background. It is estimated that the number of tanks employed was about 800. They were distributed along the front of attack, which was about 30 miles long and paved the way for the infantry. Roughly speaking, there were about eight tanks to a battalion, in some cases more. They formed a kind of battering ram which made huge breaches in our defensive lines. Since their failure in the battle of the Aisne during the spring of 1917, the French have completely reorganized this weapon. Fourteen tank regiments are said to have been formed, which are equipped with two kinds of tanks. One kind carries a 37-mm. gun, the other only one machine gun with a gunner. While the English, after their first unfortunate experiences, have increased the size and the armament of their tanks, the French have adopted a lighter type of tank, which, being smaller and more mobile, does not form such a target for the artillery. The chief disadvantage of the smaller tanks lies in the fact that they are unable to destroy so completely all natural and artificial obstacles, trenches, sunken roads, barbed wire, crater areas, masonry, etc., as the English monsters do. Our new front on the Marne bend was but little protected by obstacles of any kind, neither had we any real system of defenses, and no forefield torn by the shelling of past years. The little tanks advanced swiftly over the dry ground of the waving cornfields. They confused us by their sudden appearance, and their large numbers enabled them to support each other. The swiftness of these tanks, the pacemakers of the advancing troops, relieved the enemy artillery of the burden of preparation for the fray and made it possible for the foe to continue the battle all day without a pause. A large proportion of the violent storming attacks was, as a matter of fact, entirely unaccompanied by artillery preparation, and the enemy batteries were able to turn their full force upon our cavalry and approaching reserves, and silenced our batteries; they were able to change their positions when necessary without thereby endangering the continuity and renewal of the infantry attacks. In our previous big battles, at Verdun, on the Somme and in Flanders, a pause of five or six days between the fighting was absolutely necessary, because the axle trees of the war chariot had, so to speak, become red hot and the machinery had to be overhauled; but this time the enemy command managed to deliver a series of blows with undiminished fury for seven days together, an absolutely unnerving performance. But the enormous numbers of tanks, in conjunction with strong artillery and swarms of

[1] From the *Frankfurter Zeitung*, August 6, 1918. In part, a description of the retreat from the Aisne to the Marne.

aeroplanes, alone could hardly have rendered the moderate tactical success achieved by the enemy possible if they had not understood how to support them to the best advantage by the masses of infantry, especially by the way in which they were employed.

Almost all our divisions were unanimous in stating that colored French troops, as well as Americans, accompanied and followed close behind the tanks. They had been chosen to sacrifice their lives: they were to break through our lines. The columns following them, echeloned sixteen lines deep, were to overtake them, and they were to be withdrawn when they could do no more. . . . The Americans on this occasion were to demonstrate their capability for taking part in a big battle. With them it was a point of honor. Their divisions were not, however, entrusted with the care of any entire sector, but were divided up into instructional commandos which occasionally came up to regimental strength in various front sectors.

The German resistance had collapsed before the tanks. Our leaders quickly realized the situation and immediately threw reserves on the most seriously threatened western front of the Marne sector. By swiftly turning the batteries which were attacking the eastern front of the bend, the new front between Soissons and Château-Thierry was strengthened after the first two days of the battle. The change of position was effected during the night, our mechanical transport columns following the batteries with endless mountains of ammunition. We now see how wisely our command acted in sparing the mechanical transport service as much as possible during the weeks preceding the attack; they accomplished extraordinary feats in this region, which is so lacking in railroads. Nearly all the reserves were brought up in motor trucks. Supplies and infantry ammunition were brought up in the same way. About the third day of the attack, when our artillery was able to take its full share in the defense, quite half of the tanks which attacked were put out of action. Our defense was mobile and spirited. It was not based on clinging to any special tract of country. We yielded and withdrew, allowing the enemy to delude himself with minor successes, then unexpectedly breaking out with renewed strength, driving him back. As soon as the rattling tanks slackened, became breathless and finally collapsed in a hissing mass under the fire of the German shells, machine guns and hand grenades, all the troops ceased fighting and rushed back. Some of the enemy regiments renewed their attacks as often as six times in a single day. This of course explains why the six American divisions alone reported the loss of 32,000 men, from July 15 to the end of the month. On the whole, the Americans may be said to have stood their baptism of fire very creditably. They entered the battle cheerfully, but soon learned to respect our machine guns. In a few cases it was reported that they had shot the wounded. There were also instances of our men being misled by orders in German. There are many adventurers among the first American contingent, just as among the Australians and South Africans at first. They are better in the attack than in the defense.

NOTE.—It would be interesting to know to whom those reports of Amer-

ican casualties were made. They may have been the contribution of some enterprising U. S. prisoner to the information of a German intelligence officer, unless, of course, they were the unaided contribution of the correspondent to the enlightenment of the German people. They show how valuable is the information which reaches us from that side. Of course we had no such losses. It is interesting to have the German system of defense described so frankly. It is still being employed with the results recorded in the daily papers. Let us hope that it will continue to be employed.

German Regulations for the Employment of Machine Guns

THE German regulations on this subject, which are evidently being carried out during the present phase of the war, may be summarized as follows:

The value of the machine gun as a defensive arm is perfectly well known. Its offensive value is less well understood, and it is necessary to lay down the principles which cover such employment of it.

The employment of light and heavy machine guns in the infantry attack must be organized with due care in accordance with a carefully considered plan. A careful distinction must be made between the tactical employment of the light and the heavy machine gun.

Light Machine Guns.—In principle, the machine-gun company as reorganized has three sections each of two machine guns. Each piece has one gunner, four men, with one extra man who is used to bring up ammunition.

The machine guns form the very skeleton of the infantry attack. There are two uses of it.

Offensive nests.—This is a first wave of groups of light machine guns which play the rôle of offensive points and have for mission to keep the enemy down and prevent him from using his machine guns.

Direct participation in the assault.—Other groups of light machine guns move forward with the waves and from their essential fire element. They have for mission: To fire at short range during the advance, to aid in mopping up the trenches, to take up a fixed position, to cover the units which reform, to execute fire of pursuit.

Accordingly the constant preoccupation of the commander will be: to maintain intact the maximum power of the light machine guns; to keep up a constant supply of ammunition.

Heavy Machine Guns.—They stand between the light machine guns and the minenwerfer and field guns.

Their essential mission is not to beat down the enemy machine guns (they leave that to the trench mortars for throwing bombs and the minenwerfer), but to assure the attacking infantry a maximum of fire on a decisive point.

Accordingly they must: Aid the light machine guns to carry their fire forward (sweeping fire on the first enemy objectives to keep them down, fire on the rear elements of the enemy); support the infantry against airplanes and tanks; prevent a counter-attack and support the flanks. In order to carry out these duties the heavy machine guns are echeloned in depth.

This disposition is always kept up during the advance so that the heavy machine guns, while remaining in close contact with the infantry, are always ready to intervene at decisive points:

Either by barrage fire (direct or indirect, concentrated or not) upon the rear, the heavy machine guns can, up to a certain point, take the place of the artillery when it increases its range to fire on objectives to the rear, or ceases its fire. They can do this by firing

through intervals in the lines of infantry, by fire on the flanks, or by temporary insertion of sections of machine guns in parts of the line for the moment without these essential means of combat.

The Regulations say:

The attack continues until the final objective is reached. The system of echelon in depth, as carried out in the preliminary disposition, permits the heavy machine guns to automatically renew their attack in constant cooperation with the infantry and with irresistible force. As the tactical situation changes new duties to execute succeed each other. The force once engaged must solve its own problems with its own means and on its own ground.

But the end of the employment of the machine guns is always the same; it is to push forward the offensive power of its fire, without losing sight of the objective to be reached, in order to clear the way for the infantry which, without looking back, pushes forward with irresistible energy.

Varied Ground

Notes for Young Staff Officers[1]

A staff exists for two reasons and two reasons only: (*a*) to assist the commander; (*b*) to help the troops.

You must therefore always be ready to give information and advice to your general. It is for the general to decide on his course of action. When he has given his decision his orders must be carried out without further argument, whether the plan adopted is the one suggested by you or not. Absolute loyalty to your general at all times and in all places is a point of honor, and no written or spoken criticism of his actions can possibly be tolerated.

We are all entitled to have our own opinions, but we are not entitled to give expression to them.

When your general has given his orders it is the duty of the staff not only to issue them in an intelligible form but also to assist the troops to carry them out. This necessitates frequent intercourse with them, and it is of the greatest importance that the relations between staff and regimental officers should be of the friendliest nature. If this is not the case it is nearly always the fault of the staff officer. It is essential, therefore, when taking over a new appointment, to get the confidence of the troops, and this can only be obtained by taking an early opportunity of getting to know them and by showing them that you wish to help them in every way possible.

It will often be a staff officer's duty to report for the information of his general on the situation in a subordinate commander's area, *e. g.*, in trench warfare on the state of the line. Such a report may often have to be of an unfavorable nature, but whether it is unfavorable or favorable it is a matter of courtesy, as well as tact, to inform the commander next below your own general of the nature of the report you propose to make. This will avoid friction and charges of "spying"; moreover, the subordinate commander or his staff may often have an explanation regarding the points brought out in the report; this explanation should be given to your general at the same time as you are giving the report itself.

When giving a report it is very necessary to distinguish between what you know actually to be the case and what is only a matter of surmise or hearsay. Both natures of information are of value, but obviously as much credibility cannot be attached to the latter as to the former.

In making a verbal report remember the value of a cool and clear manner. Your general is bearing great responsibilities and it is your duty to see that you do nothing to add to them. Unpleasant facts have of course to be reported, but if they are given in an excited or alarmist manner they become a great deal worse. This is especially the case during active operations, and, unless moments are of vital importance, it is often wise to give yourself a few minutes' reflection before making your report. This gives you time to collect your thoughts and will probably result in a clearer report

[1] By a British officer.

than if it is made on the spur of the moment. A few notes on the points to be brought out in the report, written in the order in which you think they should be given, will often help.

A staff officer must remember that he is often in possession of information of a secret nature. He must therefore be reticent, but he should be careful to avoid an air of mystery which will at least cause amusement and may cause alarm.

You must at all times be cheery, and the worse the situation the more it is necessary for you to keep up a stout heart. A long face has a depressing effect not only on your general and your fellow-members of the staff, but it will certainly be commented on by the troops and will not tend to raise their spirits or give them confidence in the way things are going.

Look ahead; always be thinking of what may be coming. When it does come you will not be taken by surprise.

Anglo-American Comrades

American soldiers and sailors who visit London often pass a memorial which would interest them greatly if they were to take a close look at the bas-relief on the left side of the pedestal. It commemorates a stirring incident of the Boxer rebellion in China, when British fighting men were led to the assault by an American officer.

Only July 3, 1900, during the defense of the Peking Legation, a detachment of British, American, and Russian marines stormed and captured a barricade and outworks erected by the besiegers, which were endangering the defense. No British marine officer was available to take part in the attack, two having been wounded and the third being on duty elsewhere. The 25 British marines, with 15 Americans and 15 Russians, were accordingly led, most gallantly and successfully, by Captain (now Colonel) Myers, commanding the United States Marine Guard, who was wounded in the fighting.

When officers and men of the Royal Marines erected a memorial in London to their comrades who fell in action, or died of wounds or disease in South Africa and China, in 1899-1900, it was desired that one of the bas-reliefs should represent an episode of the operations in China, and that described above was chosen. The selection was a testimony not only to a fine feat of arms, but also to the admiration felt for Captain Myers by his British comrades, and to the comradeship of the two corps. The memorial stands on a slight grassy mound on the south side of the Mall, near the Admiralty. Railings shut off direct approach from the Mall, but there is a path from the Horse Guards' side which gives access to the monument. Captain Myers can be recognized in the bas-relief, which faces Buckingham Palace, by his wide-awake hat of the now familiar American pattern. It is not strange that American visitors are unaware of the memorial: few Englishmen could say where in London there is a public monument showing British forces led into action by an American officer.—*London Times,* September 2, 1918.

Our Returning Talkers

It is not only on the troops who are still to go over that one has to impress the necessity of discretion. Now that we are beginning to get a lot of officers and men back from overseas they seem to be doing their share of loose talking.

Anyone will listen to them and hang on their words. At the Grand Central Station in New York the other day there were five interested groups standing deep around a few privates just back from the front. In one of these groups the speaker gave it forth that there were only four captains and lieutenants left in his regiment, a most excellent remark for German propagandists or defeatists to get hold of to spread rumors of the suppression of casualty lists. The same man, on being drawn aside, afterwards explained that his was a replacement outfit and, although there had been some casualties among officers, the majority has been drawn away to other units. But he had not explained this to the crowd.

The plain fact is that men back from abroad should not talk to strangers at all, and should talk with the utmost discretion even among their intimates. Anything that can be repeated on apparently first-hand knowledge, and distorted in the repeating, can be used against the war. The very fact that we are so much farther from the scene of action than England or France carries its danger of the exaggeration of loose gossip. Every officer who has anything to do with returning troops should take measures to see that they are cautioned.

The Conduct of the Infantry Attack

The following German recommendations based on the experiences of June, 1918, when things were going very much their way, are of interest:

1. Overrun the first enemy positions quickly. During the course of the attack, do not give the enemy time to reorganize. Subordinate commanders should act quickly and forestall the enemy. The infantry should push forward boldly under cover of its own auxiliary weapons.

2. The attack should be launched *immediately on top* of the preliminary bombardment in order not to give the enemy time to get his machine guns into action. Keep close to the barrage.

3. It must be taken into consideration that, even during the heaviest artillery preparation, a few hostile machine-gun nests will remain in action; these will have to be dealt with by the infantry, *making use of the rifle,* machine guns (light and heavy), light *minenwerfer* and hand grenades. The accompanying artillery cannot be expected to follow up quickly in the crater area.

4. Concrete dugouts cannot be destroyed by the artillery; they will offer holding-on points for the enemy machine guns. Keep the entrances under rifle and machine-gun fire and attack them from the flanks. If several of these concrete dugouts lie close together, attack them simultaneously. Do not crowd together when attacking these strong points. Captured concrete dugouts are to be marked by a small flag or similar means. Do not pass by concrete dugouts without clearing them out unless they have been marked as captured.

5. *Do not attack in dense formation.* Numbers will not decide, but the use of the auxiliary weapons at the right moment.

Put in reserves at the points where the enemy is giving way, not at the point where he is holding out. Break through and roll up from the flanks.

6. *The following formations should be adopted:*

Very thin first wave, to ascertain where the enemy is still holding out.

Behind this, light machine-gun groups, reinforced by riflemen; these groups advance in rushes. Heavy machine guns and light *minenwerfer* cover these rushes and follow on in longer rushes.

Do not rush all at the same time; there must be *mutual fire support.*

When the enemy has been located smother him with *rifle* and machine-gun fire, so that he cannot make deliberate use of his weapons.

7. Tanks are best attacked from the rear.

8. Low-flying aeroplanes are to be driven off by machine-gun fire.

Do not bunch together; reserves, especially, must avoid close formation and bunching together.

9. Positions should be taken up quickly on reaching the objective (organized in depth against counter-attacks).

10. The strictest discipline must be maintained. Pillaging must be prevented. Men who rob the dead are to be shot.

German Automatic Rifle

In August the Germans were conducting experiments with a new automatic rifle from which great results were expected. This is described as a rifle which functions like a machine gun, discharging 25 rounds automatically. The cartridges are in the nature of a shotgun cartridge and are very heavy. Each contains about 120 bullets, 4 mm. in diameter. The maximum range is 200 meters. The rifle will be employed as a defensive weapon against hostile assaults and mounted for anti-aircraft defense. It is probable that a certain number of these are now being manufactured.

This information will explain the recent German protest against the use of shot-guns in the A. E. F. It is an old and customary device with them to endeavor to get a weapon or a method of war ruled out until they have perfected it sufficiently to employ it with effect.

Demobilization

The law governing the discharge of soldiers of the U. S. Army called under the draft is contained in the following paragraph of "An act making appropriations to supply urgent deficiencies in appropriations for the Military and Naval Establishments on account of war expenses for the F. Y. ending June 30, 1917, and for other purposes. June 15, 1917, H. R. 3971 (Public No. 23.) Statutes of the U. S. of A. passed at the 1st Session, 65th Congress, 1917."

SEC. 4. That the service of all persons selected by draft and all enlistments under the provisions of the Act entitled "An Act to authorize the President to increase temporarily the military establishment of the U. S.," approved May 18, 1917, shall be for the period of the war, unless sooner terminated by discharge or otherwise. Whenever said war shall cease by the conclusion of peace between the U. S. and its enemies in the present war, the President shall so declare by a public proclamation to that effect, and within four months after the date of said proclamation or as soon thereafter as it may be practicable to transport the forces then serving without the U. S. to their home station, the provisions of said act, in so far as they authorize compulsory service by selective draft or otherwise, shall cease to be of force and effect.

It is probable that by the time this magazine is printed an order will have been issued extending the provisions of this act to all enlistments, whatever the

form of contract may have been. This will mean an army with only officers in it and, in default of other legislation, we shall have to fall back upon voluntary enlistments. There will have to be an army in the United States, and even four months after the proclamation of peace, in addition to our forces in Europe waiting for transportation home, there well may be United States Army garrisons in certain places assigned to us for occupation. We, all of us, undoubtedly hope that they will be few and that we shall not have to hold them long, but it is usually easier to get into a war than to get out of one. Our experiences in Cuba and the Philippines taught us that.

The newspapers of November 17 contain a statement by the Chief of Staff concerning his plans for demobilization. For convenience of reference they are reprinted here.

Gen. Peyton C. March, Chief of Staff, outlined the War Department's demobilization plan in his talk with the newspaper correspondents yesterday as follows:

"With reference to what is being done after the armistice was formally signed, I have issued orders in accordance with a plan which we have evolved for the prompt reduction of our forces in the United States.

"I first ordered the demobilization of the development battalions throughout the country. They are 71 in number, and embrace in strength 98,199 men. The second order carries out the demobilization of conscientious objectors, who are not serving sentences. Third, the spruce production division. Fourth, central training schools for officers, with certain modifications. Fifth, the United States Guards, who comprise something like 135,000 on paper. Sixth, railway troops. Seventh, depot brigades. Eighth, replacement camps. Ninth and last, combat divisions.

Masses of Blank Forms

"We have in the United States now something like 1,700,000 men, and to muster out a force of that kind, of course, will take some time. Each man has to be examined physically, his final accounts made and a copy of his medical record transferred to the War Risk Insurance Bureau, so that the men may get compensation they are entitled to under the act, which must be properly safeguarded. Great masses of blank forms have been prepared in advance, and they are being shipped to the various camps for use as these orders go into effect.

"The orders that have already been issued affect some 200,000 men. I expect to muster them out in two weeks. When the machine is in full operation we expect to release 30,000 men a day.

"In handling this problem of demobilization one of the features which had to be considered was the subsequent retaining of men for the Regular Army, or what will be the Regular Army when Congress passes laws reorganizing that army.

"When the war broke out there were only a limited number of such men in the service, and the great number of men who filled out these units were men who voluntarily enlisted for the period of the war. So we have offered these men who came in for the period of the war the option of reenlisting if they care to.

"We have offered an immediate honorable discharge with a furlough of one month upon reenlistment and we propose to go before Congress and ask Congress to give every single man who has been honorably discharged one month's pay, whatever his grade is, as a bonus.

Will Not Lose Bonus

"These men who reenlist will not lose their bonus. Under present laws every man who is discharged from the whole army is entitled to wear his uniform for a period of three months; that is a very necessary thing, because the re-

leasing to civil life of 3,000,000 or 4,000,000 men makes it impossible to clothe in civilian clothes so great a number. So there will be a period of readjustment during which they will be wearing their uniforms.

"As men are discharged we take up the question of the officers. The officers are listed in this way: Officers who want to apply for commissions in the regular army will be considered; officers who want to put themselves in a class where they can be used for future military operations will be offered commissions in the reserve corps. The rest of them will be discharged. In this connection I also issued orders to all the staff corps that the discharge of officers and men must keep pace with the cutting down of work and they have been directed to submit lists of officers and men from time to time as they can be spared for discharge.

Mustering Out Near Home

"At the same time as these orders were given for the troops at home I cabled General Pershing, directing him to return to the United States on troop transports all the men who are casuals or convalescents, sick or wounded who are able to be moved, and these men will come in a steady flow across the Atlantic before the larger number come back as units.

"We propose, when the divisions come come back from France, to have them mustered out in the vicinity of their homes. The men from New England will be put in Camp Devens, for instance, and we intend to have these men parade in the nearest adjacent town, so that the home people can see their own soldiers. This scheme calls for the clearing out of the camps at home, and I will leave in each one of these camps a unit of the Regular Army, which will police it and take care of it, and make it ready for the troops as they come back from France."

German Ruses and Traps During their Withdrawal to the Vesle, 1918

A number of facts have come to hand which show that the traps used during the withdrawal to the Oise in the spring of 1917 and to the Ailette last October are still employed. A farm was mined and blew up the day after it was evacuated by the Germans. An underground quarry blew up. An arrangement exploded a bomb in a house as soon as the door was opened. In a cellar three boxes of explosives were found connected by wire conductors. These wires ended in rings which were harmless in appearance and which, on being pulled by chance or curiosity, were to explode the entire apparatus. Mines were placed at the bottom of the stairs in dugouts so as to destroy them or the stairs and passage simultaneously. Similar charges were found in cellars, at the foot of the stairs or in the middle of the cellar. Man traps were found made as a rule of hand grenades, one of the grenades having a priming string attached to the lever. The string was connected by means of a small metal wire to a pick buried in the ground in the communicating trench some distance from the box.

Press dispatches say that the German bodies are reported to have been found so placed as to explode a mine when the bodies are moved. If this report is correct, it would seem that it would be expedient to employ German prisoners to bury their dead. In any case it is evident that places lately occupied by the Germans are no proper field for the casual investigations of the curious.

Editorial Department

Personnel

The work of classification and of grading which is now going on in the army, the system of tests which is being carried out, are perhaps going to form a habit which will continue after the war. In the hope of reducing the labor turnover that costs the country several hundred million dollars a year, industries are beginning to consider tests to guide them in the selection and placing of workmen. Although the movement is in its infancy, enough has been done to forecast what may be accomplished by further scientific work in the field. In education it is conceivable that admission to college and achievement in college may be liberated from the bondage of personal equations as grading becomes less a matter of individual bias and more of valid records of actual accomplishment. Then college grades may be transferable among colleges, then academic marks may become significant to employers.

It is within the limits of possibility that a man may be so graded on a form which starts in at school and is continued through successive employments that the man himself will know fairly accurately himself what he can do best, and a prospective employer will know at once whether the applicant will fit into his scheme of business.

Anyone who has written and considered letters of recommendation knows how vague they are. Even with a rating card a personal interview would probably be necessary, but during it the applicant is always on his guard. He wants the job, otherwise he would not ask for it, but if a mistake is made in employing him both he and the business suffer. Indeed it would save an enormous amount of human suffering, for to fail is to suffer, if every industry had a rating sheet with which the individual rating card could be compared. Then not only your employer but you yourself would know where you stood. If you failed, you would know why you had failed. From your rating sheet a man skilled in such matters could explain not only why you had failed, but could pick out the occupation in which you would probably do well.

An employment agent would be a classification expert. Advertisements in the papers might have simply the name, age, occupation, and then a number, each digit of which would have a definite value in the official scale for the occupation in question.

Of course we have not come to this. We are a long way from it, but the men of science who are now working upon classification schemes for the Army are taking long steps toward the time when employment will be put on an exact basis, when a man can have a pretty good and tested valuation of what he can do and what he cannot do, and also the means of forming a good estimate of where he can find the best market for his tastes and aptitudes.

The Minutiae of Close Order Drill

This article has been reprinted from a circular approved by the War Plans Division of the General Staff, which was mineographed at the War College and distributed in a limited way. The

success of the method of teaching close order drill laid down in it has been remarkable, and it is now being used in many of the camps. As there have been many applications for copies it is thought that its publication in the INFANTRY JOURNAL will make it even more widely known and will cause a larger use of the methods set forth.

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Morale

The INFANTRY JOURNAL, like all other magazines, has to be made up and sent to the printer a month before it is issued. Accordingly, now that the so-called armistice has been signed (it is really a surrender), the men who read this number of the JOURNAL will do so with different interests from those they had when it was made up. In place of wondering when they are going to sail for France, they are, all of them, here and abroad, wondering when they will go home.

In Bairnsfather's "Fragments from France" is a picture of Old Bill turning to Bert and saying, "Well, I suppose they will be wanting us to stay and clean up this mess." The mess has been caused by the efficient explosion of a shell in a farmhouse. It is a mess, and obviously someone has to clean it up.

At home here the armistice has produced rather the effect of that shell upon our military machine—there is a certain amount of cleaning up to be done, and although it may be thankless work we ought, all of us, to be good enough soldiers and citizens to know that it is our work and has to be done and well done in our common interest before we go home to take off our uniforms.

A great deal of absence without leave is being reported, and this may lead to many cases of desertion among thoughtless men who see no reason for staying in the Army now that fighting is apparently over. They should realize that such desertion will be a stigma for the rest of their lives. Some of them will not think of it now, but they will find it a very poor way to end a good piece of work, quite apart from the punishment to which they will render themselves liable.

A great many men at the close of the Civil War seem to have found it convenient to sever their military connection by simply going home. Bill after bill has been introduced in Congress since then to correct the records of men who, thoughlessly enough, deserted and were dropped as deserters. But they were dropped, they were deserters, and deserters they remain. It is worth thinking about. The soldiers now in the service entered it with honor. It is worth some temporary inconvenience to leave it with honor.

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The Psychology of Social Reconstruction

This article upon war is well worth reading and considering, especially at this time when, as the present war draws toward its close, men and women are beginning to cry out that it will be the last of all wars. Yet so many men and so many women have cried out the same thing after so many wars.

The aspiration undoubtedly rose like a prayer from the ruins of the towns which Attila left behind him on his retreat fifteen hundred years ago from the same ground over which we fight today. In spite of this prayer, during the ensuing years almost every town

in that part of Europe has given its name to a siege or to a battle.

One of the most dangerous habits of mankind is that of believing that things are because they want them to be and of then acting upon that conviction. The men of the Civil War period decided that the Civil War was to be the last of wars and, acting upon this decision, let the training and knowledge of war which they had acquired die out in the land. The Spanish-American War was not large enough, did not last long enough, to change this conviction. It was not so much a war as the service of a writ of eviction. This war is a different matter. Today all over the world arise the lamentations of women over their dead sons. In this country, with the increasing influence of women in political life, it well may be that their voices will demand that never again will their sons be taken from them for war. This demand must be met if it arises, and it probably will. It is a demand which, if yielded to, may be very dangerous. We are not alone in this world. There are other nations which have no apparent intention of even wanting to forget that the male animal has always fought.

It does not in the least mean that one likes war to believe that even after this one it will be necessary to prepare against future wars. Not to do so would be to act like a doctor who, after treating a case of smallpox, should decide that there would be no more smallpox in the world and who would blot out of his text-books the means of treating it. He would hardly be considered wise in his profession if he did not realize that, in spite of vaccination, there is still smallpox.

Overseas Service

At this time when a collapse of our enemy's resistance is in the air, whether it actually takes place in the near future or not, it must be difficult to carry on training in this country with the same energy with which it was pursued when every organization knew that it was going to France just as soon as the minimum amount of preparation had been obtained. Of course, divisions are going over, they will continue to go over, but in all those which are not actually under orders the question is being asked: "Suppose the war stops," and this question can hardly make for efficient training.

Suppose the war does end—all wars have at some time or other, and this one is certainly not going on indefinitely—with the Germans eager to get by negotiation what they can out of the wreck; it hardly looks as though they thought it was going on indefinitely, but if it does not, what will become of the troops now under training in the United States?

The matter is worth considering. To begin with, getting out of this war is going to be about as difficult as getting into it. It will not end like a dance, with everyone putting on his hat and coat when the music stops playing. Apart from the question of transportation there is the question of occupation. To secure German execution of the terms of peace a certain amount of her territory must be held; mere signing a treaty will not do. It will have to be carried out in the presence not merely of delegates of the conquerors, but of an armed force strong enough to secure compliance. It is extremely probable that we shall be called upon to con-

tribute our share toward that force, and the question is worth consideration as to whether our quota of it will be made up of soldiers who are now abroad. If it is not so made up, men must be sent from here, and they have to be as trained and just as ready for that service as they would be to engage in the present battle. There will be no security that they will not be required to fight, that is, there will be no security until the terms of the treaty of peace are executed under their eyes.

They should be selected units. They should be the best we can turn out. They will in a sense be a guard for the United States and will be subject to the same inspection, and if not found fit they will not be sent.

The Infantry Journal

The INFANTRY JOURNAL has done its part in aiding in the preparation for our success abroad, but now that we have won there will still be an army and there will still be Infantry.

A serious situation confronts the INFANTRY JOURNAL, due to the material dropping off of our subscribers, and some steps must be taken to restore its circulation.

The peak circulation was due to efforts in the early officers' training camps of members of the Infantry Association who knew the Association and what it stood for, as well as what it had accomplished in the past. These officers, in brief talks to the candidate officers, outlined the purposes and aims of the Association and recommended that the candidates subscribe for the INFANTRY JOURNAL. This they did in large numbers.

Most of these men finally entered the military services and went abroad. Hundreds of them neglected to notify us of changes of address; thousands did notify us, but the mail facilities abroad have not been of the best and we have reason to believe that many copies of the JOURNAL never reached their destination. We fear that requests for renewal subscriptions met the same fate, or the former subscribers had other interests that induced them to neglect to renew their subscriptions. The result is apparent in the reduction of the number of names on our subscription list.

The INFANTRY JOURNAL is now a good business property, and if it is continued along business lines there is no reason why it should not eventually become a revenue producer and thus aid the Infantry Association materially in its future work. Its advertising revenue this year will be greatly in excess of any previous year in our history, and we have money in bank and in Liberty Bonds. Other service magazines discontinued publication.

The older members of the Infantry Association who helped us a year ago are scattered far and wide. We have tried to reach the newer officers by correspondence, but without success, in so far as stimulating interest is concerned. Any appeal to new subscribers must be made by word of mouth.

Upon demobilization there will still be an Army of the United States, and the JOURNAL will still be the organ of the Infantry. There will be new problems to be solved and their solution will be materially aided by discussion. The columns of the JOURNAL will be open for them. From now on mail facilities for our troops abroad should improve and the JOURNAL should reach its

subscribers with less delay. There will be more leisure for reading and for writing, and it is urged upon officers of the Infantry who expect to remain in the service, or who, if they expect to leave it, will remain an interest in it, that they not only subscribe for the INFANTRY JOURNAL and tell others why they should subscribe for it, but that they should give advice to the editor concerning its policy. The JOURNAL belongs to the subscribers. It is not the personal property of the Executive Council or of the editor.

Now that at least a temporary settling down is coming for the Army, it is hoped that subscribers will give their addresses, renew their subscriptions, and write for the magazine. It needs the old subscribers and it needs new ones. You can make it what you want it to be.

Book Reviews

The American Rifle, by Lieut. Col. Townsend Whelen, General Staff. New York: The Century Company, 1918. Price, $5.

This is a definitive work on the American rifle in all its phases, historical, ballistic, design, operation, practical use, etc. It deals not only with military rifles, but with all rifles of American manufacture in common use today. It is written chiefly from the civilian standpoint, that is, from the standpoint of the civilian target shot, and the sportsman, but also contains much information of use to the military student, the underlying principles of sound rifle construction and rifle shooting being essentially the same for all classes.

The book was written in response to a strong demand for a work on this subject. The growth in interest in this subject in recent years is not perhaps generally known. There are at least six monthly periodicals, which, in response to this interest, find it advisable to run special departments covering rifles, ammunition, and rifle shooting to the extent of a dozen or more pages in every issue. There are in existence at present over two thousand civilian rifle clubs using all kinds of rifles. This public has steadily demanded a standard and authoritative work on the subject, nothing having been available heretofore except some small handbooks, scorebooks, etc. Colonel Whelen was well qualified to present such a work, having been for many years a close student, not only of the military rifle, but of all other American rifles as well. He is also a marksman of international reputation.

The book contains 637 pages, and is illustrated with over 350 photographs and diagrams. The text is such that a knowledge of mathematics is not necessary, and the advice will be found exceedingly practical. There is much in it that is new, and the principles are sound. That portion dealing with practical rifle shooting sets forth the one best method of firing and instructing which is used by practically every rifleman of reputation, and is the first time to our knowledge that this method has been set forth in its entirety.

The Doctor's Part, by James Robb Church, A.M., M.D., Colonel, Medical Corps, U. S. A. 350 pages, illustrated. New York: D. Appleton and Company. Price, $1.50 net.

In spite of the title, this book is in no sense a technical work devoted to matters of interest to the medical profession only. It is written for the layman altogether, and gives in perfectly plain terms the various stages which the wounded soldier passes through from the time he is stricken on the field until he finds himself tucked away in his appropriate place for recovery. A clear idea is given of the complex machinery which has to be put into operation to salvage the human wreckage which results from battle and carnage. To the average person here at home this is largely a matter of conjecture. A man is wounded and then there is a hazy impression of No Man's Land, of tired stretcher-bearers, and, somewhere on beyond, a clean hospital with its merciful adjuncts to heal the shattered body. Just what does happen from the time the soldier is hit until he reaches

the hospital which is his ultimate destination, Colonel Church shows us very graphically in the book he has written.

Much of the bravery of the present war has been found in the hospitals. The men fight the battle of their country there as well as on the front lines, and the patient cheeriness of the wounded, their whimsical good humor and unfailing good nature are illustrated by anecdote. The book is divided into sections, dealing with various phases, such as "The Hospitals of the Interior," "The Front Lines," "Transportation," and the other links which go to make up the whole, which is the "Sanitary Service."

Colonel Church was in France for two years, first as military observer with the French army, and afterwards with our own forces subsequent to our declaration of war with Germany. He had an exceptional opportunity for observation, and he has in his book given us a glimpse of some of the side lights of the war which have been heretofore left uncovered. The book reads easily, and should be of particular interest to those who have received word that someone dear has been wounded "over there."

A General's Letters to His Son on Minor Tactics. New York: George H. Doren Company, 1918. 95 pages, 16mo. Price, $1.00.

This little book deals in an interesting way with a few very simple minor tactical problems, illustrated by sketches and preceded in the first letter by twenty-three axioms which are intended to be considered in working out tactical problems.

The book is "easy reading," and should be very helpful in assisting the embryo officer or junior lieutenant in training his mind to solve tactical problems relating to the movement, disposition, and fire orders for small bodies of infantry.

In the opinion of the reviewer, there is yet to be written the ideal book on minor tactics. In fact, really excellent instructors in this most important part of an officer's education seem to be exceedingly rare. One officer in the service has, however, dealt with the subject of minor tactics along what seems to be proper lines. That officer starts in his solution of a problem, whether on the ground or on paper, at the trunk of the tree instead of jumping to the branches. To that officer all tactical problems are solved through the application of five tactical principles. Whether the problem is small or large, offensive or defensive; whether it is one of advance, retirement, or position, the application of common-sense to the following should gain the desired object:

1. Get a clear estimate of the situation as a whole.
2. Act according to the circumstances and nature of the terrain.
3. Consider teamwork.
4. Consider fire superiority.
5. Use simple and direct methods.

The advantage of the application of the same principles to all problems will, it is believed, be seen by all, and especially by those who have had occasion to conduct a course of instruction in minor tactics for noncommissioned officers or for new subalterns.

But all this is a digression from the letters of "General X. Y. Z." to his son. Although he has started in his first letter with twenty-three axioms which might tend to confuse any beginner in

minor tactics, and although he has not followed the scheme which the reviewer believes to be the best, nevertheless the author has carefully omitted all except the salient features in his problems, and the solving of the problems by the reader prior to reading the solutions of "General X. Y. Z." cannot help being beneficial to the reader and especially to the beginner in minor tactics.

Infantry Journal Advertiser

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No. 48

WASHINGTON, D. C.
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Annual Meeting

The annual meeting of the Infantry Association will be held in the offices in the Union Trust Building at 5 p. m., December 27, 1918. All members of the association in Washington at that time are earnestly requested to be present, as the annual reports will be presented, and plans for the future must be discussed. Is the work of the Association finished, or has it but just begun?

News and Gossip

Instead of using this space for news and gossip of the Association, as we should like to do, we have been compelled for months now to devote it to repeatedly asking, nay, almost begging, our members and subscribers to keep us posted on their changing addresses. Why only today we were attempting to mail checks to some of our valued contributors and to our dismay found we did not have their correct addresses. This shows how thoughtless some men can be. Perhaps the reader of these lines is one of those for whom we are holding a perfectly good check. Even if this is not so, we may be unable to mail his copy of the INFANTRY JOURNAL to him because we do not know where he now is. We hope each member and subscriber will look for his magazine each month and, if it does not come, write us to know why. Perhaps we can tell him. Use the blank, if convenient and you do not mind mutilating your Journal.

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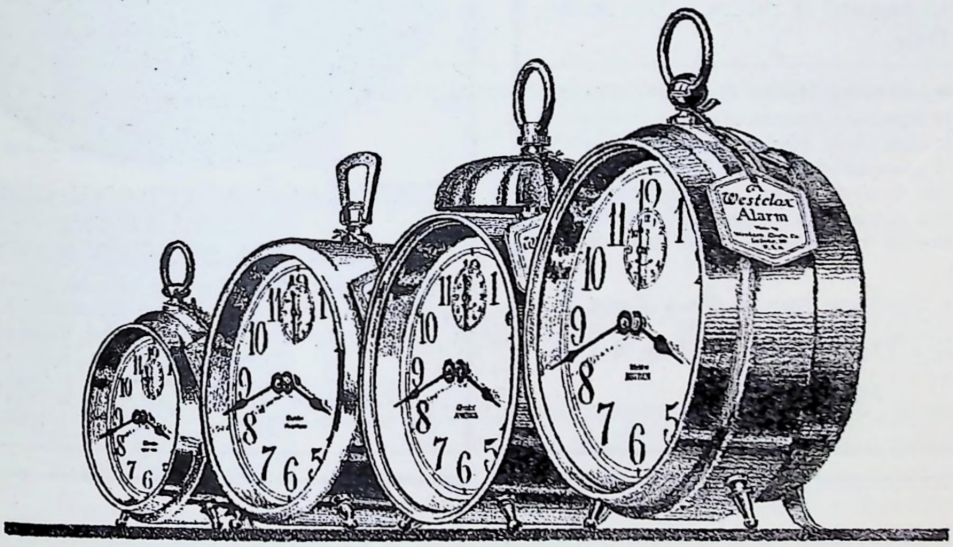

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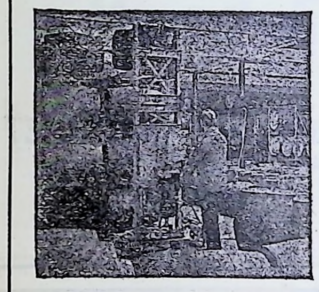

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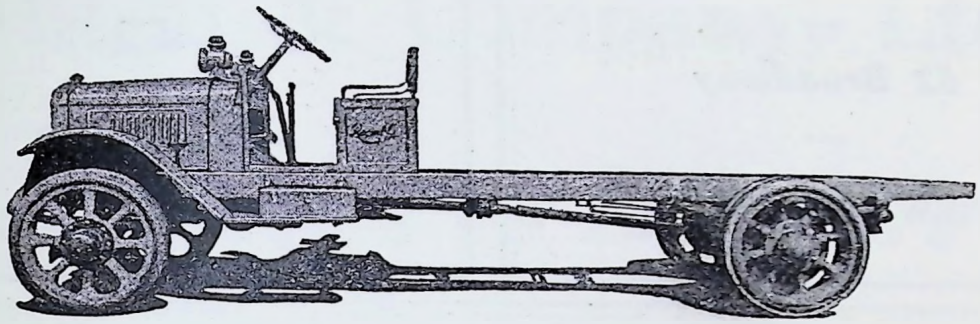

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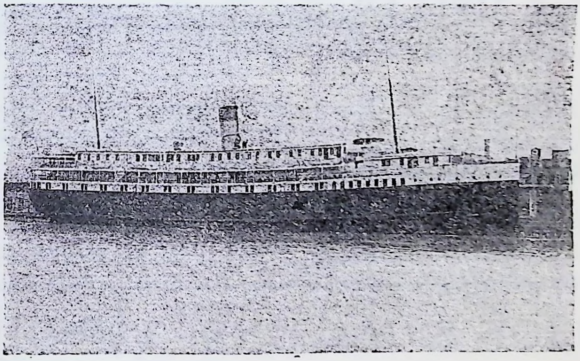

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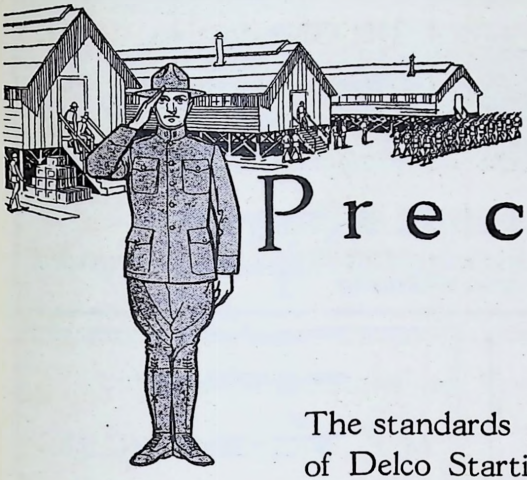

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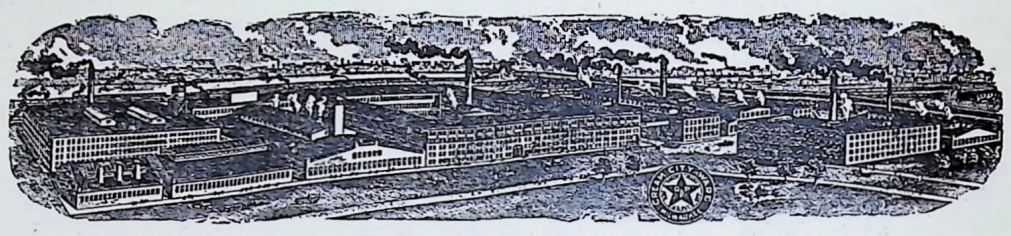

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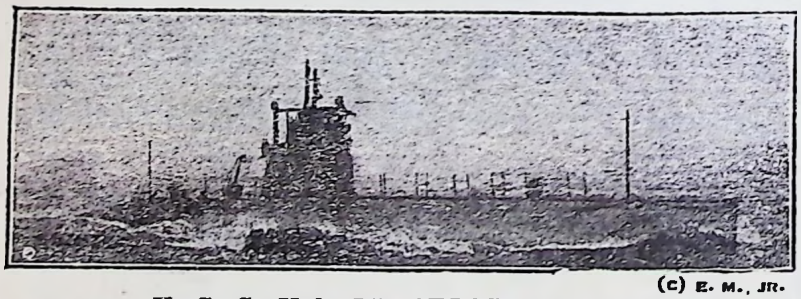

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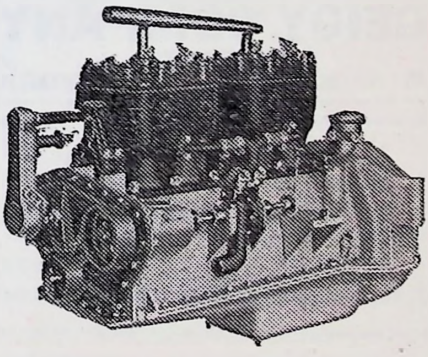

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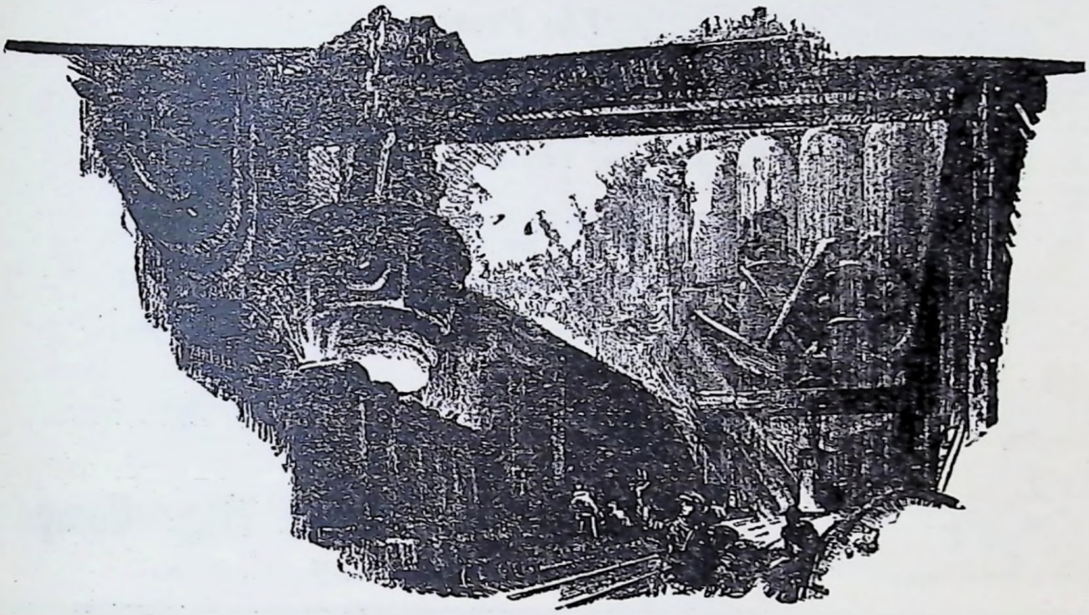

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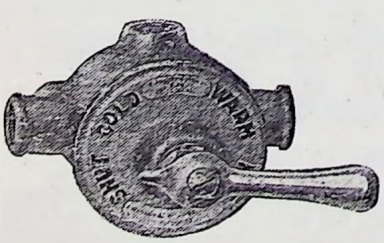

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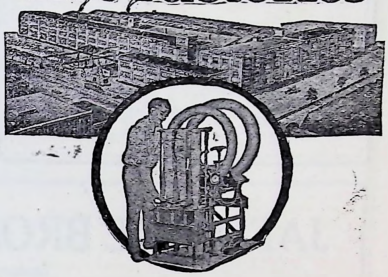

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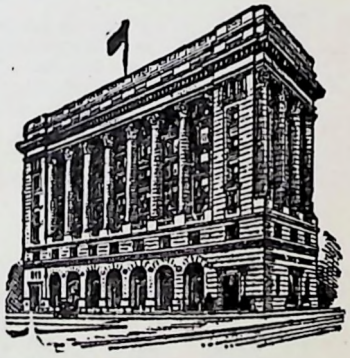

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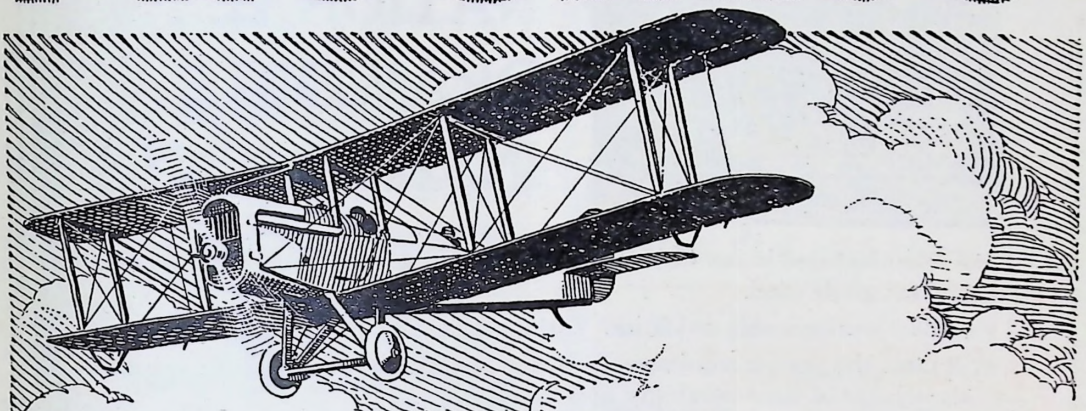

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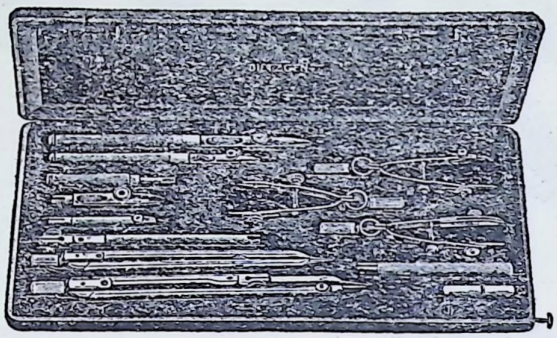

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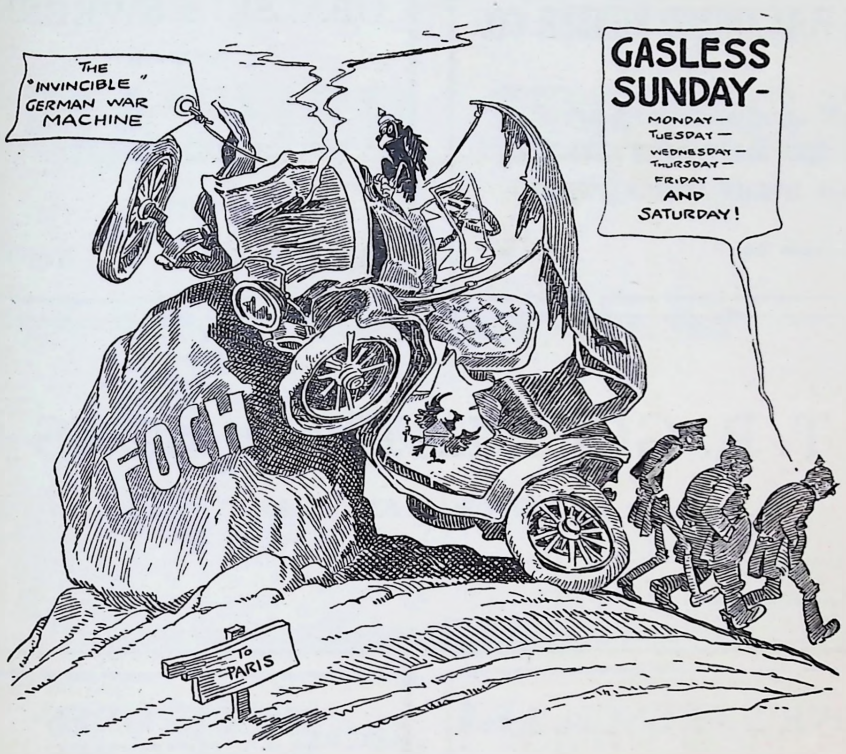

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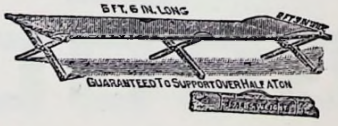

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¶ History frequently repeats itself—but once in a while it skips one. When war was declared against Germany the shoe industry of the United States was in a state of complete preparedness. There has never been an hour when the progress of our arms has been impeded through inability of the Government to obtain the footwear so vital to the equipment of our troops.

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¶ Industrial preparedness in shoe manufacturing and in shoe machinery is helping win the war.

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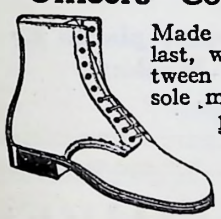

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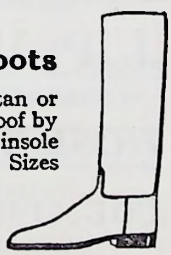

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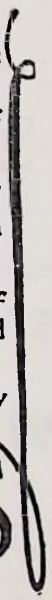

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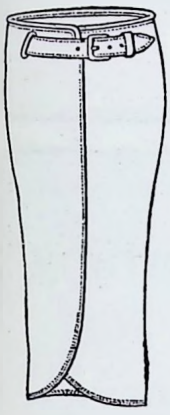

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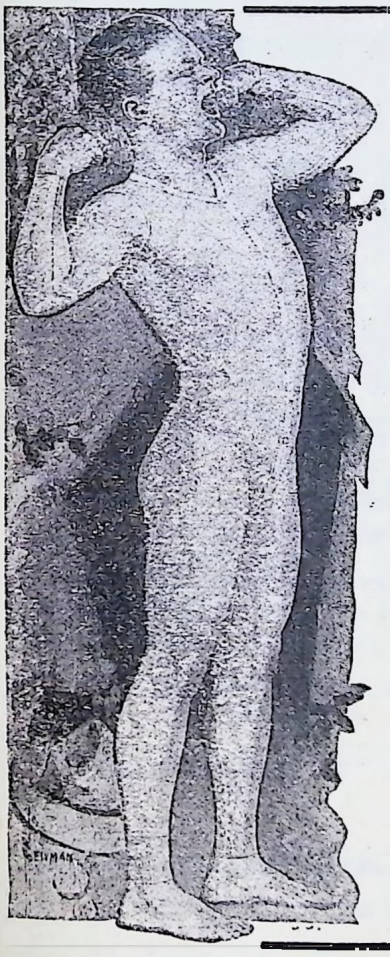

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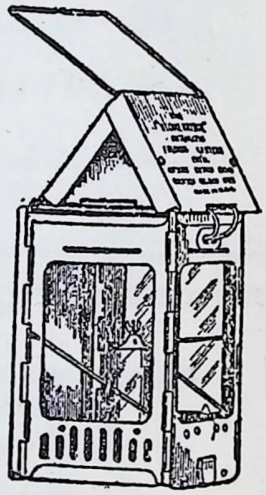

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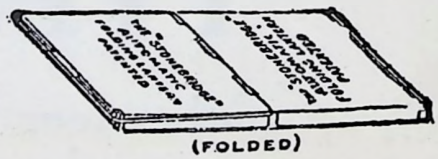

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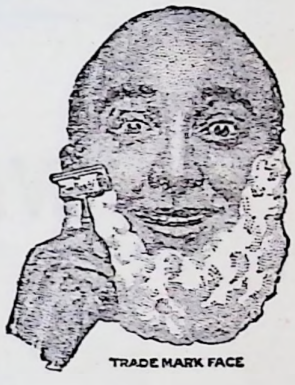

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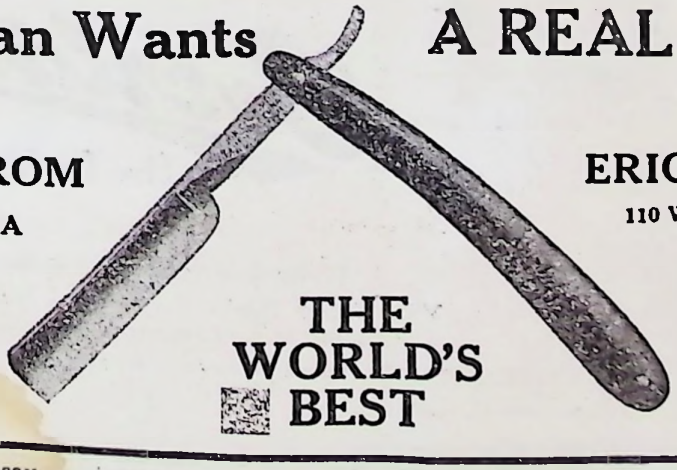

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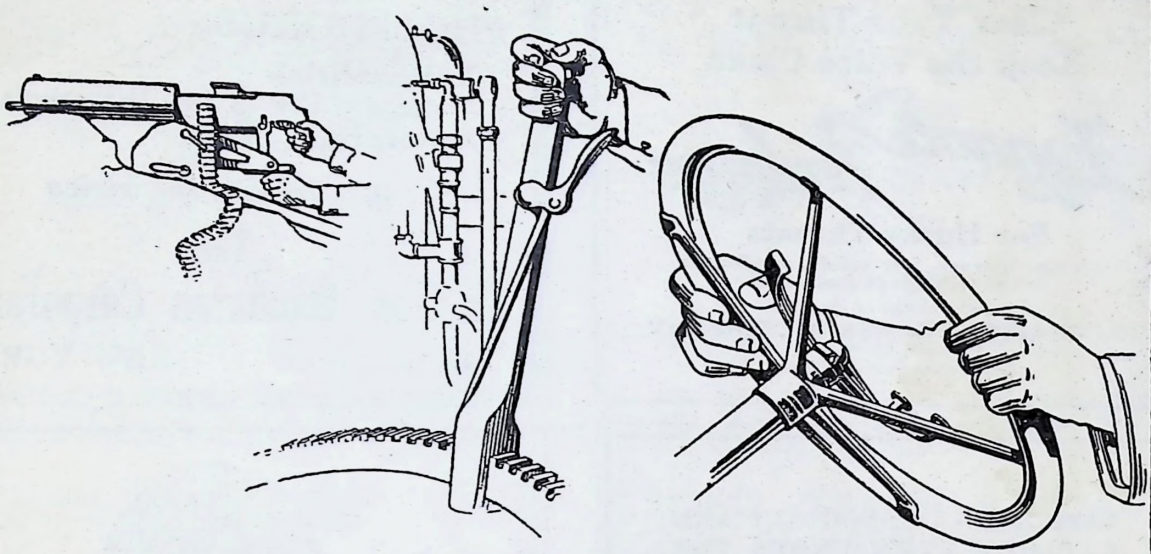

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